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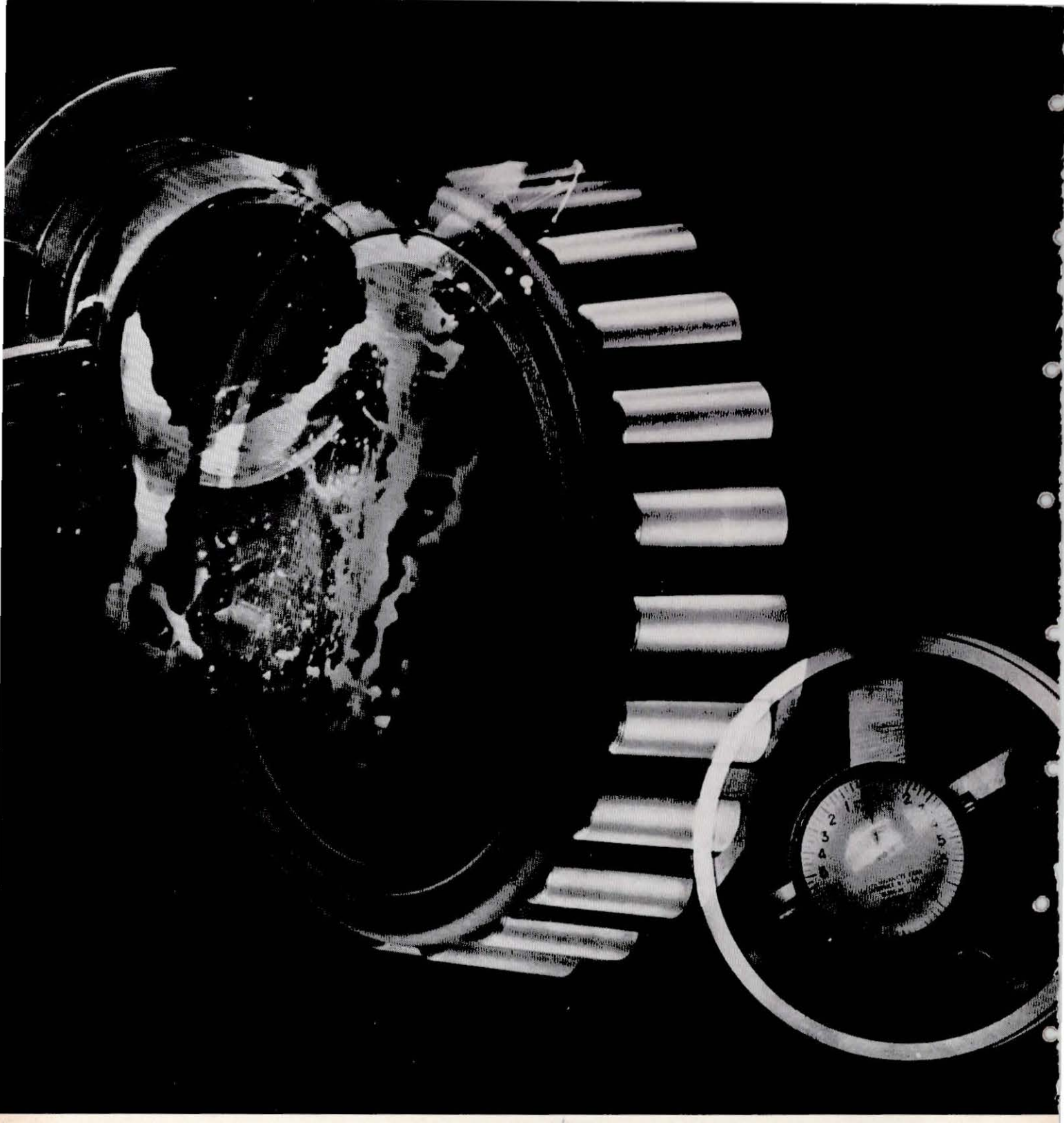

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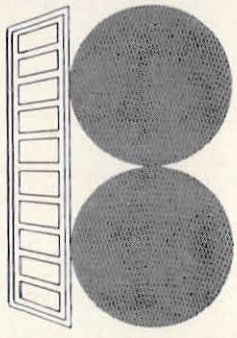

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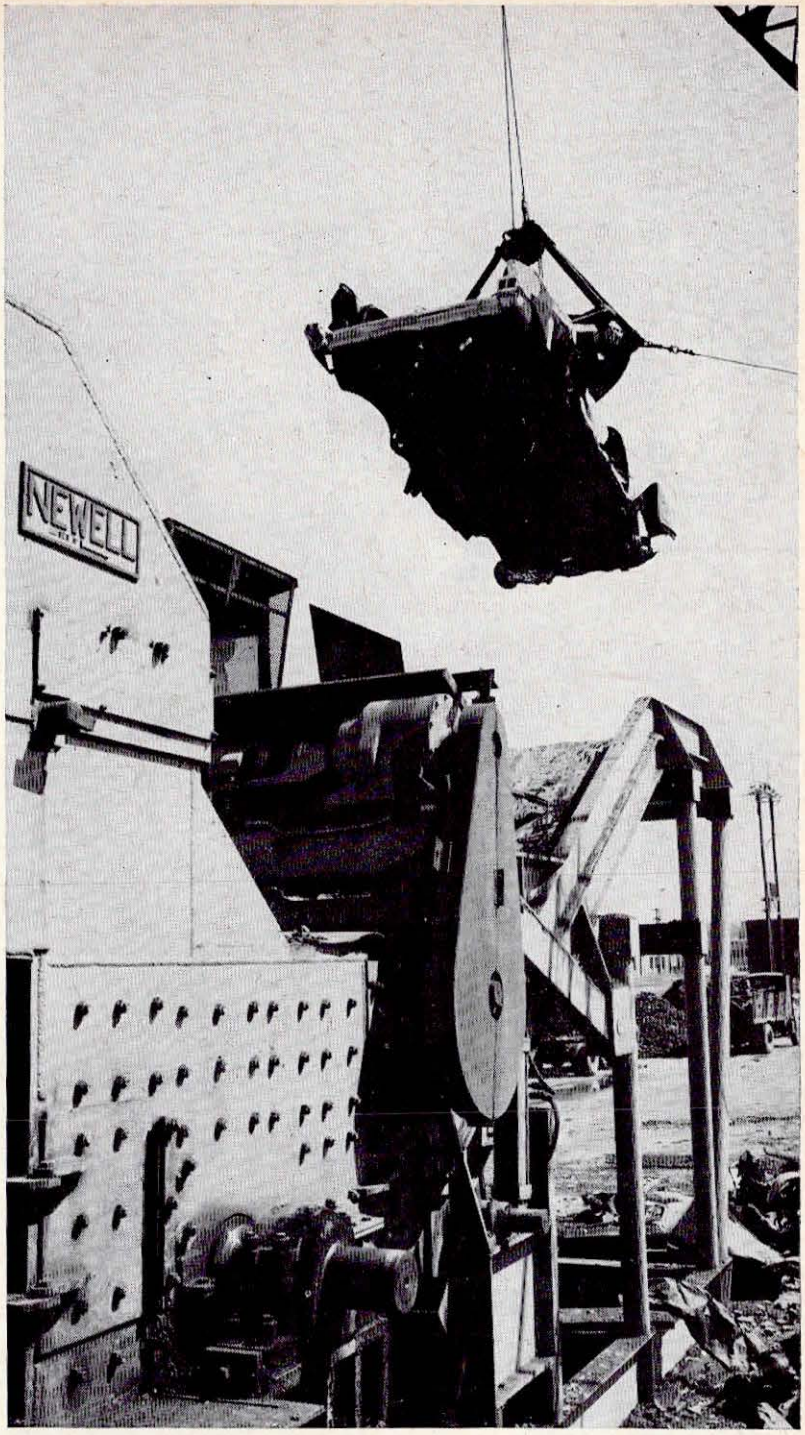
...as 500 ANCO self-locking nuts hold tight under severe shock and vibration

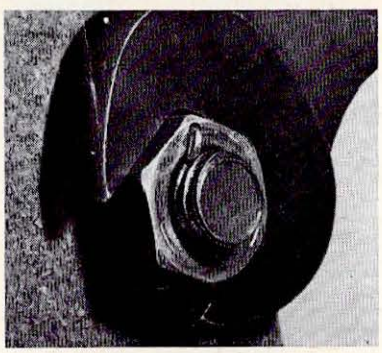


Down the chute she goes . . . into the 9½-ft-wide "mouth" of this unique car-shredding machine. A special hammer-mill arrangement shreds the stripped-down auto body and frame into fist-sized pieces of scrap. A vibrating belt then carries the shredded material to magnetic separators which sort out ferrous scrap for use as a steel making ingredient in electric and induction furnaces.

The machine was designed and built by the Newell Manufacturing Company, San Antonio, Texas, for installation at the Roth Steel Corporation, Syracuse, New York.

ANCO nuts solve loose-bolting problem

Tremendous impact and vibration are involved in the shredding process, and problems were encountered on earlier models from repeated loosening of the hammer-mill liner bolts. A nut and lock washer combination was tried but did not perform satisfactorily under severe operating stresses. Then Bethlehem ANCO self-locking nuts were tried and proved to be the most effective solution for maintaining tight connections. Now ANCO nuts are specified for all critical connections on Newell's latest model machine. *Bethlehem Steel Corporation, Bethlehem, Pa.*



How ANCO nuts provide positive locking action

A special steel locking pin acts as a ratchet, sliding along the thread as the nut is tightened. The point on the pin in contact with the bolt thread prevents loosening under shock or vibration. Sufficient leverage, however, can be applied with a hand wrench to reverse the direction of the pin for easy removal . . . without impairing the reusability of either the nut or the bolt.

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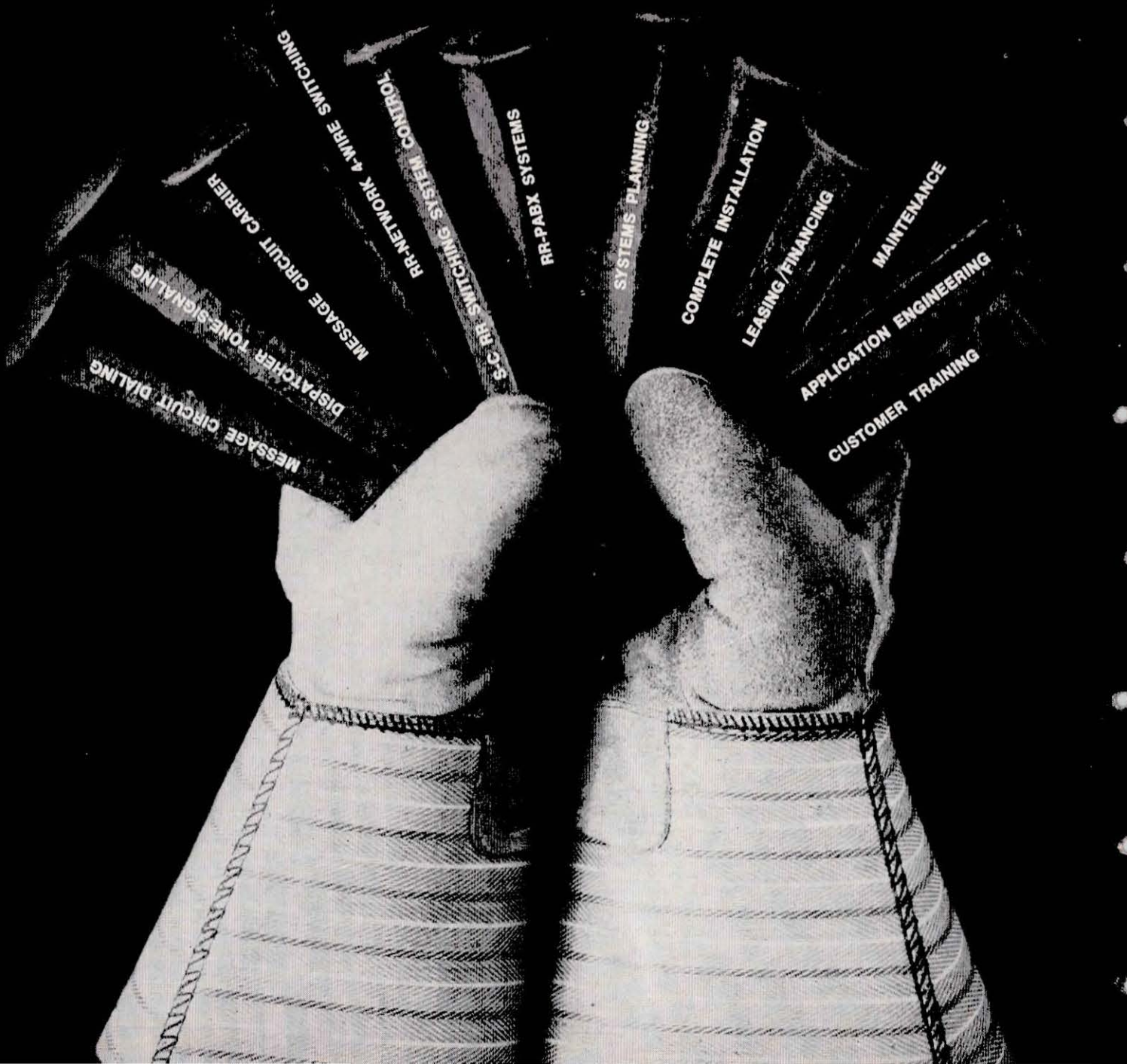

RAILWAY AGE

September 4, 1967 • Vol. 163, No. 9

THIS WEEK

18 ACI gets scanned in AAR tests

Automatic car identification equipment tests have been completed and a report is scheduled for release this month.

20 A look at Expo 67

Up in Montreal, the rail is undisputed king—and it wouldn't be half the fair it is if it wasn't.

22 Transit hits a snag in California

Three measures to aid transit were turned down by the legislature. Bay Area Rapid Transit is hardest hit.

24 St. Louis: Is rapid transit in the picture?

The fact that half of downtown St. Louis is now devoted to parking facilities is only one reason why a transit study is under way.

29 GE adds 3,300-hp diesels to its line

The manufacturer's U33B is the highest horsepower four-axle unit yet announced by domestic builders.

38 Viewpoint—Moderation in new wage demands?

Indications are that new demands will be stiff—but perhaps not as stiff as those that touched off the last crisis.

DEPARTMENTS

28	As the Editor Sees It	36	Railway Bookshelf
33	Freight Carloadings	7	Short and Significant
12	Lines on Labor	32	Transit Personnel
8	Monday Morning Report	38	Viewpoint
33	New Equipment	17	Watching Washington
30	New Products Report	11	Week at a Glance
31	People in the News	34	You Ought to Know

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SHORT AND SIGNIFICANT

Plug-in power for piggyback

To win a share of fast-growing food traffic, between the United States and Japan, piggyback cars are being fitted with power systems for handling electrically refrigerated containers. On ships, such containers are powered wtih 220-v, 3-phase alternating current. Railroads have been at a considerable disadvantage as part of an intermodal team because it has not been possible to provide electricity on a piggyback car. Burlington, Pacific Fruit Express and Santa Fe are working to overcome this, as each equips a conventional piggyback car with a diesel-alternator set and distribution system into which containers will be plugged for the rail movement. Each of the prototype cars will be able to handle three 24-ft Matson Navigation containers as they move between Hawaii and Chicago. Refrigerated meat will be handled on the return trip.

●

Gellman goes to Budd as planning v-p

Aaron J. Gellman is joining the Budd Co. in the newly created post of vice president—planning. For the last nine years Gellman, 37, has served as vice president for planning of North American Car Corp. in Chicago. In his new job he will be based at Philadelphia and will report directly to Budd President Philip W. Scott. Scott said Gellman "will bring a new dimension to corporate planning for the Budd Co. His point of view as an economist will be extremely useful in internal development as well as in matters of external growth through possible merger or acquisition."

●

Great Northern prepares for containerization

"We think there is a great opportunity in container traffic especially to the Orient," Great Northern vice president-marketing, M. M. Scanlan told New York Security Analysts when he spoke on the same program with GN President John Budd. "We plan to be ready to handle such traffic as it develops, and one of our new marketing managers will be a specialist in it, Scanlan added. But, reviewing GN's immediate past and its near future prospects said he could not see many large areas where cost savings, comparable to those resulting from dieselization and maintenance of way mechanization could now be found.

●

New York's Penn Station gets electronic boards

Electronic train information boards went into operation last week at New York's new Pennsylvania Station, which is nearing completion along with the new Madison Square Garden and a 29-story office building. Solari America, Inc., supplied train boards for the ticket concourse, the train concourse, and, on a lower level, the arrivals concourse. Each board has 10 lines for information. Control will be from a console in the train announcer's booth. The boards will be maintained by Transportation Displays, Inc., in cooperation with AT&T and the New York Telephone Co.

●

Another breakthrough for rubber-tired trains

Mexico City has decided to follow the lead of Paris and Montreal and run its subway trains on rubber tires. Sources in the Mexican capital reported last week that 300 rubber-tired cars have been ordered from France (which is supplying more than half of the capital for the new transit system). Construction of the first of three lines is now under way and is expected to be completed in June 1969. The first line, 5.4 miles, will run from Chapultepec Park, through the center of the Federal District, and terminate near the International Airport. Two other lines in the 18.6-mile system are scheduled for completion by October 1970. Cost of the system is estimated at $202.4 million.

MONDAY MORNING REPORT

Transit men head back to school

When the second Mass Transit Act was passed a year ago, there was a provision in the statute for training. The idea was that the Department of Housing and Urban Development would assist in training activities that would prepare the young men of today for top jobs tomorrow, and keep the senior men of today up to the demands of the jobs they hold. The program is getting into full swing right now—and it looks as though HUD is going to make it much bigger.

HUD and local bodies split the tab

Just announced by HUD Secretary Dr. Robert Weaver was a series of grants to be made for university fellowships to managerial, technical and professional men in the transit field. Intended to be a joint program, with HUD and local bodies sharing the cost and with the universities providing the schooling, the HUD grants cover 75% of tuition and other academic charges, as well as the man's salary, up to a $12,000 total. Public agencies running local transit systems or having private local transit systems within their regional planning responsibility select the employees who will get the fellowships, and put up the remaining 25% of the cost. The fellow can be involved in such aspects as engineering, architecture, administration, management or operations, and may elect graduate study at any university offering courses in his area of specialization.

Seminars keep executives on their toes

Preparing younger men for the climb up the ladder is one aspect; the other main one is helping to tone up management skills of those who already occupy senior transit positions. This summer, 44 officials on the general manager, vice presidential and department-head levels were in effect sent back to school, under the auspices of another HUD training program. Two-week seminars were organized during July and August at Kent State University in Ohio and the University of West Virginia at Morgantown, two each on each campus. Classes were conducted informally, but the days were full—sessions began at 8:30 a.m. and ended at 4:30 p.m. Business management and industrial engineering instructors at the schools joined transit men in seminar discussions of all types of management problems, including planning and scheduling, labor and government relations, evaluation of social and economic impacts, computer programming.

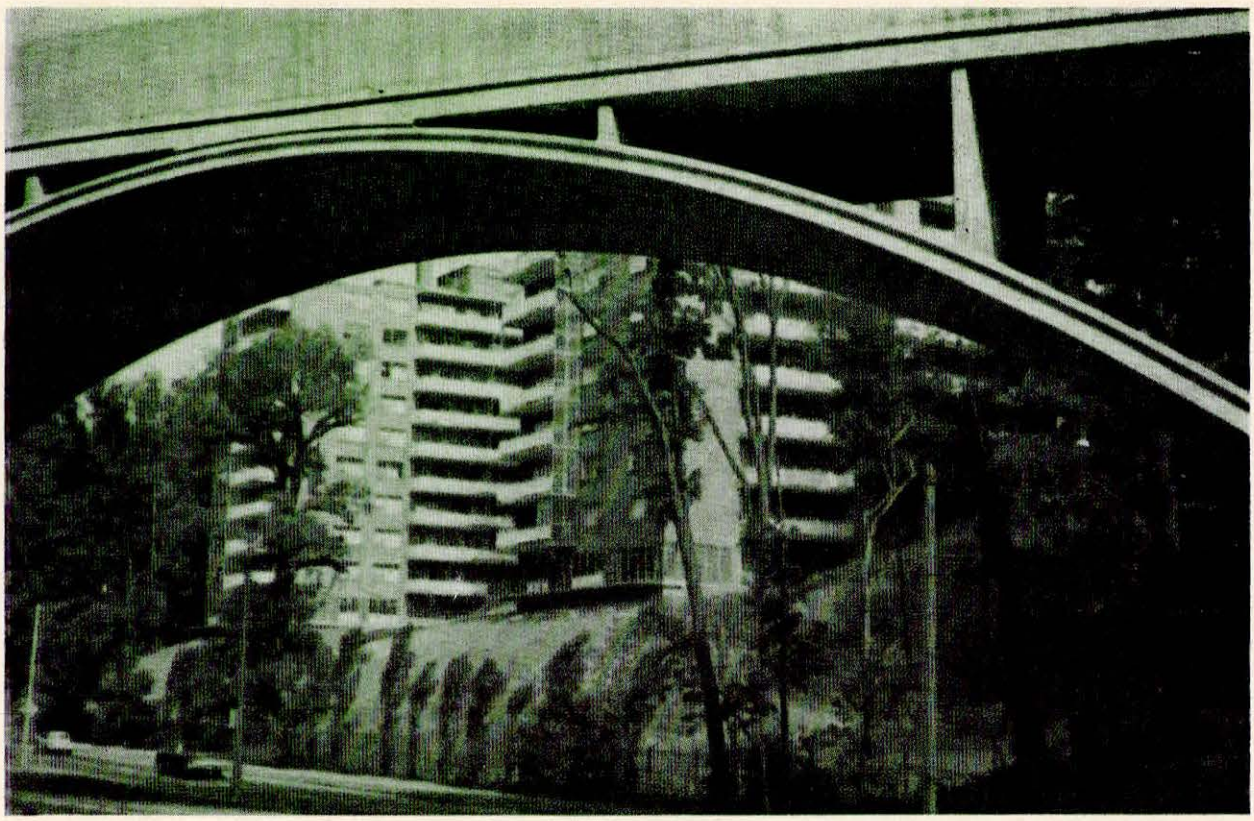
Games transit leaders play

Dr. Samy Elias of the West Virginia faculty created a "management game"—a training exercise in decision-making, using computers. The seminar group was divided into four teams representing imaginary companies. Each plotted its own course of operations and investments, and then compared results with those of the other "transit authorities" posted daily outside the seminar room. The variables were controlled, but the responses to those variables were not—and that's where an understanding of the decision-making process came in.

Keep an eye on what's ahead

Another useful aspect of the seminar program was an introductory survey of what's coming up in transit technology. Innovations in design and hardware were discussed and illustrated by means of scale models, slides and films. When it was all over, what was the reaction? By and large excellent. A few dissenters felt the approach had little value in solving their day-to-day problems; the consensus was that the seminars had been of great help in keeping transit executives informed and up to the mark.

Rail rapid transit



Unique covered bridge on Toronto Transit enhances appearance and ensures quiet in this attractive residential area.

...and building developments

Modern rail rapid transit spurs real estate development, increases land values—and assessments—and adds new tax revenues.

In Toronto, for example, estimates are that the expanding subway will generate $2 billion in new office and apartment building within the next ten years.

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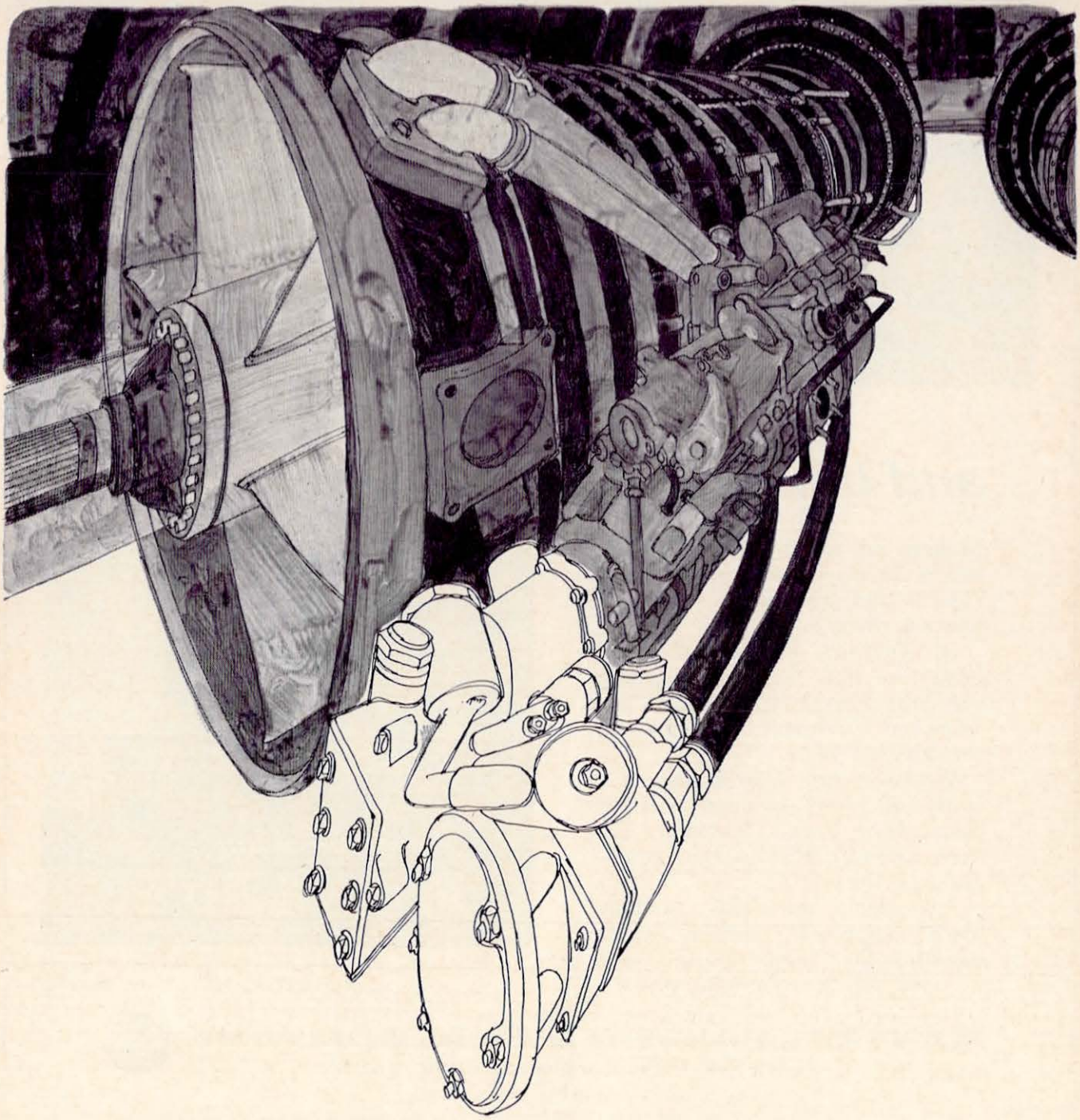

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WEEK AT A GLANCE

Budd wins order for 270 LIRR cars

Dr. William Ronan, chairman of the Metropolitan Commuter Transportation Authority of New York, announced award of a $57.3-million contract to the Budd Co., for construction of 270 high-speed commuter cars for service on the Long Island.

The cars are the first in a new 500-car fleet which the MCTA, a state agency, is acquiring for the LIRR, as part of a $200 million modernization program.

The per-car bid submitted by Budd turned out to be appreciably lower than expected—which prompted MCTA to raise the number of cars in the initial order from 250 to 270.

The new Budd cars will be electric m-u vehicles, capable of speeds up to 100 mph, of stainless-steel construction, and air-conditioned.

Sundberg-Ferar cooperated in developing the design concept, which calls for contoured and upholstered, three-and-two seating, carpeted floors, fluorescent lighting, soundproofing, glareless windows, and a public address system.

According to Dr. Ronan, "The successful bidder has demonstrated that the major advances in commuter transportation which we seek—such as 100 mph cars—are not only technically achievable, but are capable of being produced at prices competitive with conventional cars of the past."

Advanced production and design features of the cars were stressed by Budd President P. W. Scott, who said, "We believe we have achieved a breakthrough in design, weight and performance."

The first four cars are due for delivery in Sept. 1968, the next four in October, and 30 more in November. After that 28 cars per month will be delivered until the order is completed.

IC aims for world's best commuter operation

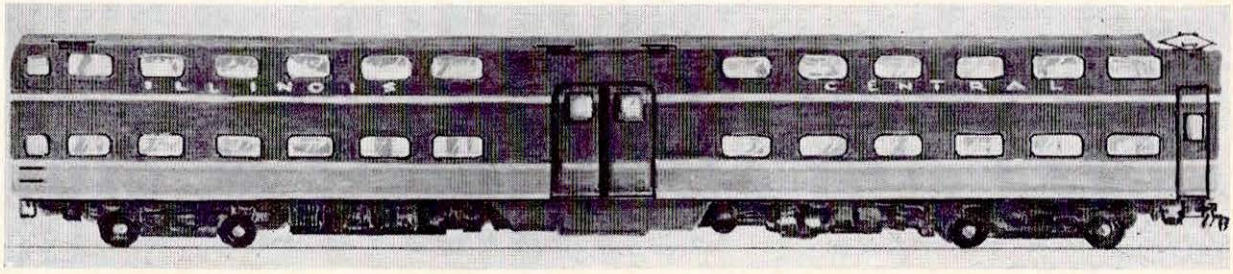
The last shall be first, in Chicago—or, to put it another way, Illinois Central, last major Chicago commuter road to modernize its service, aims to create "the best commuter operation in the world." As outlined by Vice President-Passenger Services Paul H. Reistrup, IC is embarking on a four-point program (nicknamed CAP, for Commuter Advance Program). Essential elements of the plan are (1) cut down on the number of inner-city stations; (2) simplify the fare structure; (3) work out coordinations with the Chicago Transit Authority; and (4) acquire new equipment to replace the present fleet of 41-year-old, non-air-conditioned cars. Step-by-step, this is how IC would go about making CAP work:

—Eight lightly-patronized mainline stations would be eliminated, leaving IC with 41 station points. CTA routes, feeder and through, are available at or near each of the in-city stations to be discontinued.

—The present system of 90 separate fares would be simplified down to 20 fares. A zone-fare plan would be set up; 10- and 25-ride tickets would be eliminated from the structure. Fares would be adjusted, with increases generally for short-haul and infrequent riders and decreases for long-haul and regular passengers.

—Arrangements would be worked out for validation of CTA transfers at certain IC stations.

—New equipment, possibly electrically-powered double-deck coaches (below) would be acquired under the Urban Mass Transit Act and a proposed Chicago South Suburban Mass Transit District. The district, covering 13 south-suburban communities, would get the equipment with two-thirds financial support from a federal grant. IC would rent the new fleet "at a lease rate which would cover the entire cost, including carrying charges, of the one-third amount put up by the mass transit district through revenue bonds."



E-L stockholders approve ICC inclusion plan

The Interstate Commerce Commission last June drew up some conditions for the inclusion of the Erie Lackawanna into the Norfolk & Western system. Last week, at a meeting in a Park Avenue, New York bank, E-L stockholders voted to accept the ICC's terms for merger.

The vote—3,402,019 shares for the inclusion, 115,148 against—approves a plan that would require N&W to set up a new corporation, acquiring as subsidiaries the E-L, Delaware & Hudson and the Boston & Maine. Norfolk & Western has court actions pending to annul the ICC June decision ordering inclusion of the E-L. N&W wants ICC approval of its proposed merger with the Chesapeake & Ohio before it takes in any of the smaller roads. If the larger merger is granted, N&W has made an offer to also include the Jersey Central and the Reading.

The ICC's plan for inclusion of the E-L would create a new subsidiary that would assume all obligations and liabilities of the existing E-L, including more than $300 million of outstanding bonds and equipment trust certificates.

E-L officers have estimated that it will probably be about 18 months before the case gets up to the Supreme Court for a final decision.

GUS WELTY'S LINES ON LABOR

WELTY

HE'S NOT AN AMATEUR, he's not an old reactionary or a labor-baiter. He's Judge Samuel I. Rosenman. And when he says there's "a better way to handle strikes," there's an awful lot of reason to listen. The judge, now more-or-less retired, had his say in Newsday, the Long Island-area newspaper, just a day before the shopcraft walkouts began. And the meat of his long and carefully-detailed exposition might be carved out in one filet: "I am convinced that there eventually comes a time, after all has failed, when some third entity must come in and settle those parts of a labor dispute on which the parties cannot or will not agree."

JUDGE ROSENMAN'S proposal involves compulsion—but not the ad hoc, hit-or-miss type of compulsion which has now applied twice in recent years in rail labor disputes. His "better way" is a permanent way: The establishment of a "separate system of labor courts and a separate labor judiciary with the sole function of deciding labor disputes."

SCORN IS HEAPED HIGH, as the judge considers the ways in which disputes may be settled. As he points out, "a dispute between individuals can be settled in one of three ways, by agreement, by outside determination, or by a fist-fight behind the barn. A strike is an enlarged, organized fist-fight, without violence or physical injury but with plenty of blows. Centuries ago, civilized man, in the pursuit of justice, gave up this kind of combat."

IN THE BEGINNING, at least, Judge Rosenman would limit the jurisdiction of the labor courts to well-defined areas, including transportation, communications, essential services of a public nature, and manufacturing where the national health or security are involved. The key element is that "the right to strike should be curtailed when it is in conflict with the public interest."

OBJECTIONS TO THE PLAN will be heard from both union and management sources. The former New York Supreme Court justice expects this. But it doesn't deter him: "Labor court decisions should be conclusive and binding upon both sides (and) in that sense the result will be the same as by compulsory arbitration. Yet I hazard a guess that most of the present rejection and abhorrence of compulsory arbitration by management and labor will gradually diminish and finally disappear."

NO OUTLINE of this length can hope to cope with the depth of the judge's reasoning, or the breadth of the plan he proposes. But no outline can end, either, without the recommendation that the judge's comments be required reading, in full. Who knows? The Rosenman plan just might not end with one published article.

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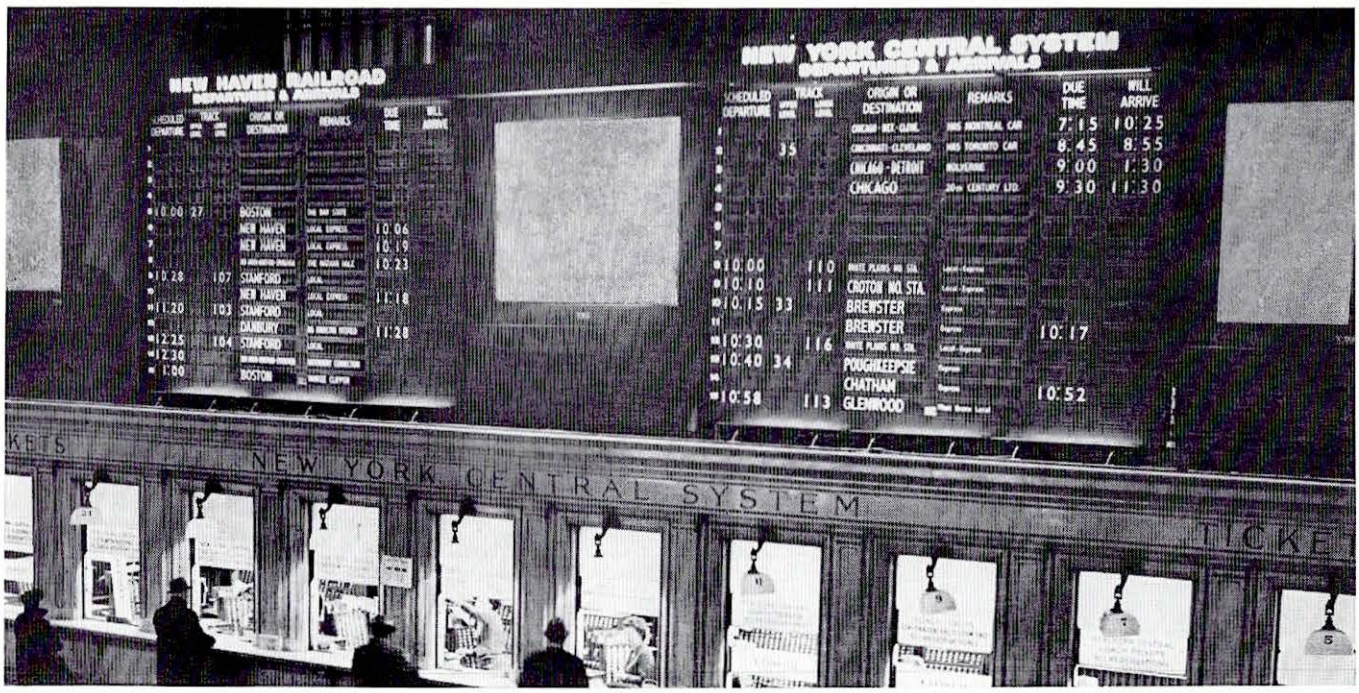

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"Railway Age provides the Massachusetts Bay Transportation Authority, from the Board of Directors and the General Manager to departmental and divisional heads, with concrete, constructive, and, above all, current information. It is a necessary management tool."

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Concrete roadbed test set

A U.S.-designed highway building machine is to be given a chance to build segments of experimental railway roadbed in Britain. Taking a leaf from the competition's book, British Rail engineers will use a modified version of the machine already widely utilized for construction of superhighways and airfield runways for producing experimental sections of continuous-slab, reinforced-concrete roadbed.

Reduced maintenance, noise reduction and precise tolerances are goals of the experiment. British Rail is seeking more substantial track as part of its program for 150-mph links between major British cities. Minimum trackbed thickness is another aim of prime importance with the expected spread of 25,000-volt electrification. Increasing the clearances of small-bore tunnels and bridges has been one of the biggest cost factors in British electrification.

The classification yard at Bingham, Nottinghamshire, will be the site of the trials. A number of different cross-sections with variations in reinforcement and track securement details will be laid and then tested by engineers from BR's nearby Derby research center. Most designs will be solid slabs of varying section, but at least one is expected to use prestressed concrete longitudinal sills set into recesses in the base slab for carrying the rails.

The slip-form paver to be used was developed by California-based Guntert & Zimmerman. The slip-form concept involves the extrusion of concrete without the use of side forms. Line and level are electronically controlled from tensioned piano-wire guides staked along the right-of-way, requiring a subbase graded only to approximate level.

While much highway and runway paving by the slip-form methods has not been reinforced, it is practicable to do so. The heavy reinforcement required for the 12-foot-wide trackbase slabs is not expected to present major problems.

Continuous-slab concrete railway roadbeds are not entirely new. In the U.S. and South Africa, experiments have been conducted. Advancements in the technology of concrete construction is seen as overcoming faults which developed in earlier work. ■

WATCHING WASHINGTON WITH WALTER TAFT

TAFT

TUCKER STILL HOPEFUL ON ROUTES BILL—Chairman William H. Tucker of the ICC is confident that the Commission will get, "in the near future," the through-routes legislation it is seeking from Congress. The chairman expressed this confidence in a recent address before the Practising Law Institute, an organization of attorneys specializing in motor carrier cases.

What the Commission wants is power to require motor carriers to enter through-route arrangements, and power to prescribe intermodal through routes between truckers, on the one hand, and railroads, express companies and water carriers, on the other. The railroads oppose these intermodal provisions, but take no position on the Commission's call for power to require joint truck routes. The Commission already has power to require railroads, express companies, and water carriers to establish joint routes—both intramodal and intermodal. The trucking industry opposes the Commission's proposal, but offers an alternative plan which embodies what it considers safeguards and also lets the Commission require joint rail-truck routes. Meanwhile, the Commission's plan has much shipper support, including that of the National Industrial Traffic League.

CHIDING—Chairman Tucker does not think the Commission should have been left to take the initiative in the through-routes area. He thinks the real impetus should have come from the transportation industry itself. He considers the industry's failure to achieve "maximum coordination in services between our various modes" as one of its fundamental weaknesses.

"I suggest," the ICC chairman added, "that each of the various carrier modes suffers from a severe case of channel-mindedness, continually fortifying their modal fences, boundaries and prerogatives. . . . Surely the [different] modes must seek fair protection on legislative and regulatory policy matters, but these efforts must be kept in proper balance. There is no real future in expending enormous energies in this quest. These wasting energies must be marshalled more effectively toward sharpening the basic tool of progress—dramatically improved service to the American public."

BIGGER TRUCKS COMING—The ICC chairman's appraisal of the outlook for trucking included his citation of an estimate indicating that operators of commercial highway vehicles may save as much as $3 billion a year by operating over the new interstate system. Tucker also expects tractor-trailer combinations to get bigger. At the close of last year, 35 states permitted single tractors to pull two-trailer combinations, he reported, adding: "This number of states will increase rapidly, I believe. Under appropriately controlled conditions, the allowable lengths of trailer combinations will go from 60 through 65 feet to somewhere in the area of 98 to 108 feet. The axle gross weight allowed on most highways will probably also increase to correspond with better road construction."

TRAFFIC OUTLOOK—As to the traffic outlook, Tucker endorsed a forecast in Resources in America's Future (published by Johns Hopkins). Truckers will probably get relatively more of the future business than the railroads, the forecast said. "For the smaller shipments," it added, "trucks have a preponderant advantage, although air shipments promise to become increasingly important. Regionally, trucks are the means by which increasingly large urban agglomerations can be kept welded into economic units. Long-distance trucking may also be expected to continue its expansion, and nationwide trucking has only just begun."

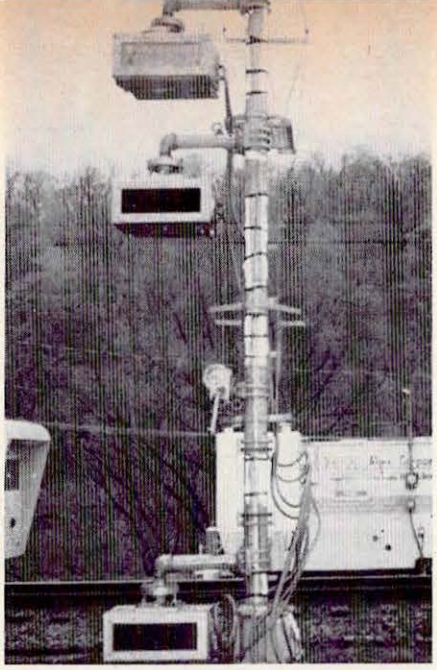
About the time of the chairman's speech, the Commission's Bureau of Economics released revised estimates on distribution of the 1966 and 1965 business. The Bureau's statement shows that the railroads last year handled 42.6% of the intercity ton-miles—up one tenth of a point from their 1965 share of 42.5%. Truckers also improved their relative position by one-tenth of a point, bringing it up from 23.3% to 23.4%.

AUTOMATIC CAR IDENTIFICATION tests sponsored by the AAR have been completed at the field site on the Pennsylvania at Spruce Creek tower near Tyrone, Pa. Abex, Sylvania and WABCO provided scanners and furnished their own trailers or housings for their own control and readout equipment. Thousands of cars' labels were scanned as eastbound trains (below) passed the ACI scanners during a six-month test.

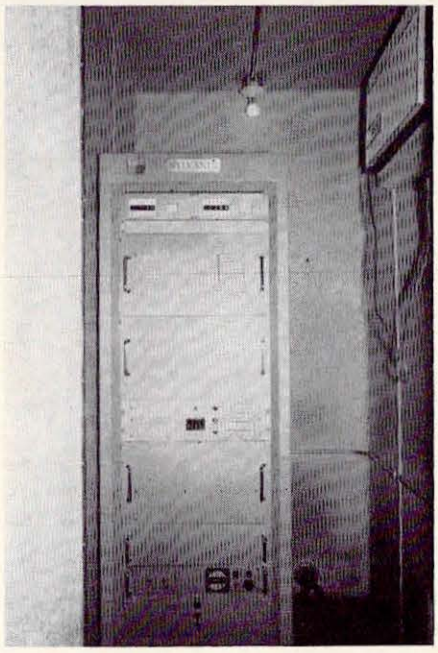
READOUT FROM TEST SCANNERS was provided in the AAR's Research Center trailer. Teletypewriters made hard copy records of car label data.

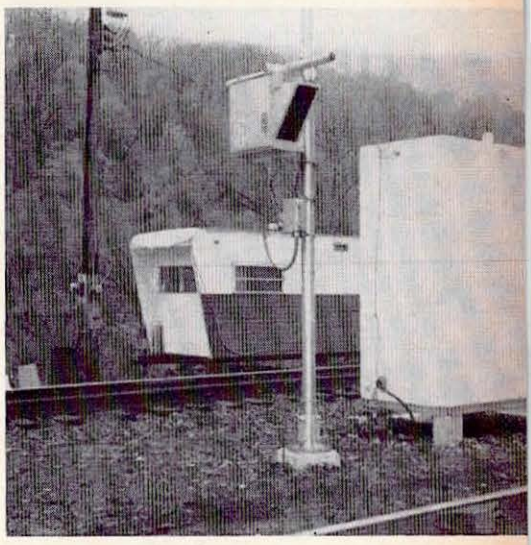
ACI gets scanned in AAR tests

Results of field and laboratory tests on three automatic car identification systems are currently being studied.



ABEX SYSTEM used multiple-head scanner (left) to read labels on piggyback trailers and freight cars. Control equipment (above) was housed in a trailer.





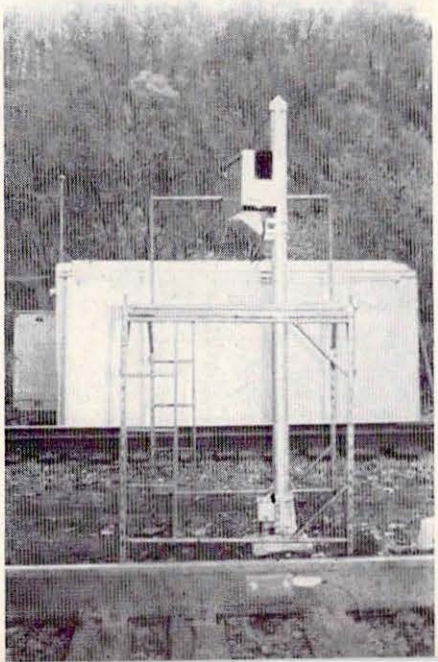
SYLVANIA SCANNER (above) was pole-mounted alongside fiberglass house which contained the associated control and buffer storage equipment (left).

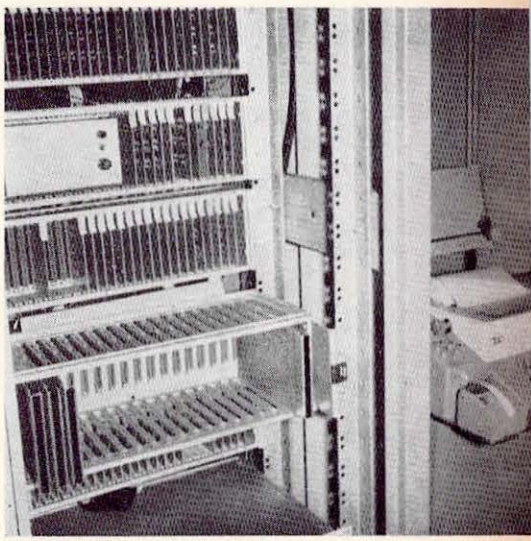
The AAR's testing of automatic car identification equipment is now complete, both in the field at Spruce Creek, Pa., on the Pennsylvania, and in the Association's Chicago research center laboratories.

There has been no decision as to which of the three ACI systems under test has been accepted as the standard for railroad usage.

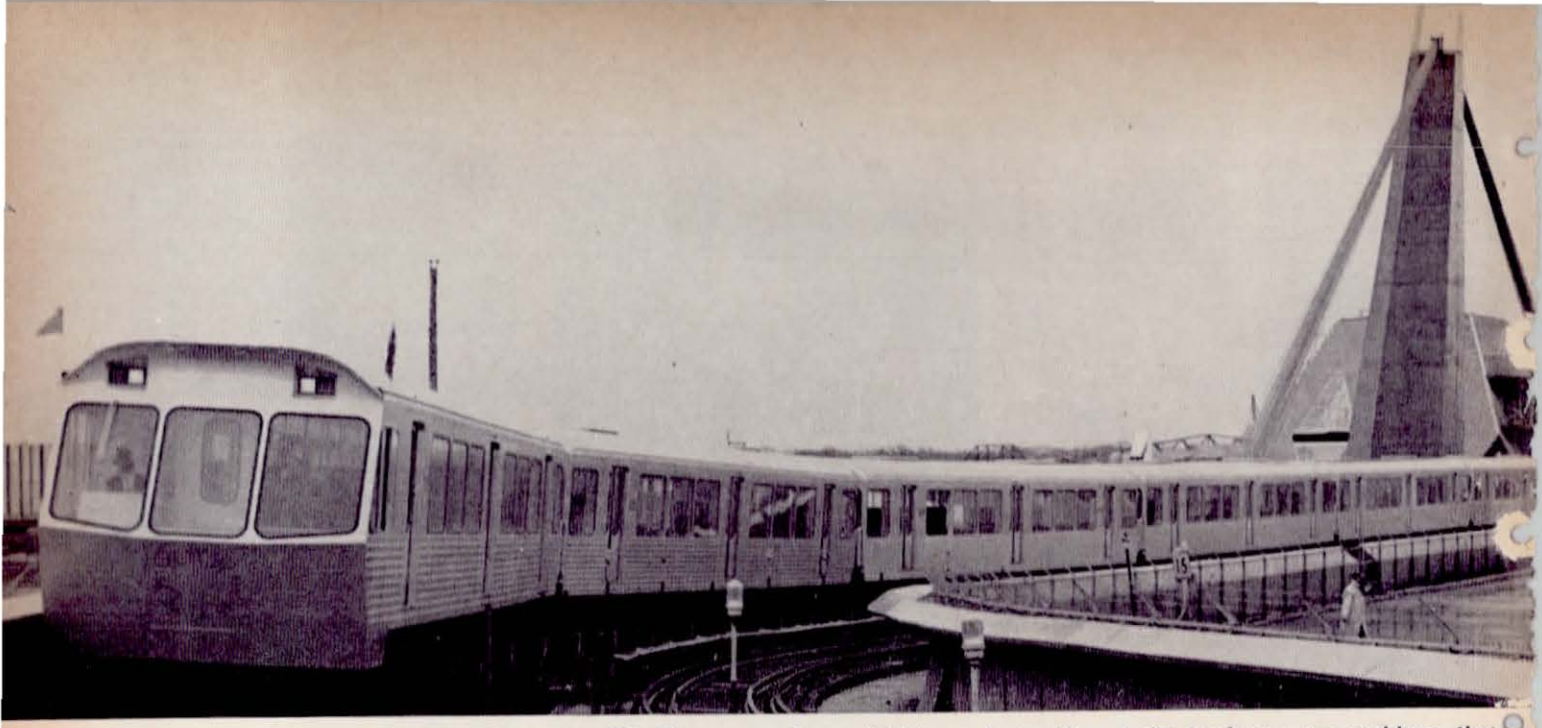
The Data Systems Division's Ad Hoc Committee on ACI and W. M. Keller's research scientists are studying results of field and laboratory tests. Evaluation of test results is on schedule. The Ad Hoc committee report is to be presented to the AAR's Board of Directors at the September meeting.

The three competing systems, shown here, are manufactured by Abex Corp., Sylvania Electric Products Inc., and Signal and Communications Division of WABCO. ■





WABCO SCANNER (left) is connected via cables to equipment house, which contained printed circuit boards and magnetic core buffer storage (above).



"Choking congestion and highway destruction of the landscape are problems that

A look at Expo 67, the rails, and

Imaginative use of rails is the key to solving our growing transportation problems.

Montreal—Here at Expo 67 the rail is king—and you are given another forceful reminder that a lot of the problems of the railroads stem from their having been born so long ago, so far ahead of their time.

As a Fair buff, from way back, I've seen most of the world's fairs of consequence since 1933. You'd have to say the '33 Chicago fair was dominated by the automobile. I particularly remember Ford's "Roads of the World" and Chrysler's big sand lot where safety-belted "Hell Drivers" rolled the then-new all-steel-bodied cars over and over and miraculously stepped out alive.

The '39 New York fair. Cars again. Who could ever forget GM's Futurama?

At Brussels in '58 it was the ski-lift-inspired skyride. Seattle? The monorail.

The Moses '64 fair in New York? The exhibits of the three auto giants stood out.

But up in Montreal, the rail is the undisputed king. Indeed, much of the very ground on which the fair stands in the middle of the St. Lawrence is fill from the excavation of the new Montreal subway. Without the Metro and attendant rail-based systems, Expo 67 would be hard to imagine.

In fact, the Metro itself is looked on by many of the millions thronging to the fair (top daily figure has been 569,000 at this writing) as the best show of all. An architect friend of mine was so enchanted by the varied designs of the stations—each one different—that he traveled all three branches of the system to visit every station!

My own reaction was that the trains accelerated faster, cruised slower and were a bit more noisy than I had expected. And they were warmer. I suppose that in Canada they worry more about the winter than the summer, but I thought the ventilation was seriously inadequate for August. Yet the Metro was an over-all delight and any U.S. city that could have it would find itself raised a good many notches in the scale of civilized living.

●

(This is an aside, but back in New York it is a shock to be in the subway and be hit by a horde of rampaging riders charging into the train at 42nd, 34th, 28th. . . . Does the under-capacity of the NYC system create the brutishness—or do the brutes create an indifference as to how they are transported? This is the chicken and the egg, again. At any rate, it is clear that the beautiful, clean widely-admired Montreal system would be rapidly reduced to a mess by a flood of NYC riders—and that the New York system, in reverse, wouldn't be so much of a discarded newspaper, paper cup and cigar butt jungle if given the surcease of a week's use by Montreal citizens only. Undoubtedly, the charm of the Metro is partly its riders.)

At the fair you ask yourself: how in the world could so many people get so quickly from Montreal to the islands of Expo without the subway tunneled under the St. Lawrence? And, once there, how in the world could these people get back and forth between the fair's four widely spaced stations so quickly and easily without the Expo Express—an above-ground version of the Metro?

There is trackless transportation at the fair, yes—bicycle-type cabs, buses, truck-and-car "trailer trains"—all fighting a winning (?) or losing (?) battle with pedestrian traffic. Maybe it's a draw.

The real way to get somewhere easily and in a hurry at Expo 67 once you have left the two-railed Metro and Expo Express is to take the Minirail, a small-scale, automated monorail that swoops sedately up and down and around (right through Buckminster Fuller's giant U.S.A. globe, for instance) and is a sort of flattened-out roller coaster ride more adapted to local delivery needs than the main line Metro and Expo Express.

So the rails dominate Expo 67—and it wouldn't be half the fair it is if they didn't.

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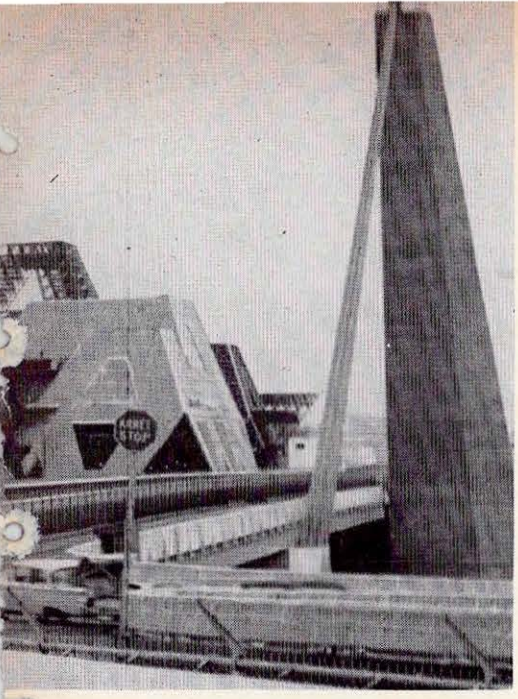
Now come with me, please, to one of the hardest-to-get-into exhibits at the fair—"Labyrinth." We are standing on one of six balconies in a tall, somewhat oval-planned building. At one end



only the rail industry can solve."

"Metro is looked upon by many as the best show of all"

the liveable future

is a vertical screen. Below us is a horizontal screen. Generally, images projected onto the vertical screen have been photographed from the side, images on the horizontal screen from above. So we're seeing things in elevation and plan.

The picture begins gloriously—the human prospect is entrancing. Then things tend to go sour. Finally, the sound track is saying. "The experiment doesn't seem to have turned out very well."

And what are the two screens showing to illustrate this unhappy turn in the human adventure? Grinding, witless traffic congestion is the chosen symbol of things gone wrong—and stunningly effective it is. On the vertical screen, we see the tall buildings and jammed street level of a central city. On the horizontal screen, an overhead view of (I suppose) Los Angeles, with all the looping, coiling, bumper-to-bumper monstrousness of the Concrete Octopus that occupies so much of that city.

I say this: anyone who doesn't think that a vastly broader and more intelligent use of rails is a key to the liveable future should get out of the railroad business. Or, to give himself a second chance, he should go to Expo 67 and imagine what this great gathering of people would be like without its intelligent, imaginative use of rails!

●

"Nothing," said Zola, "matches the power of an idea whose time has come."

The funny thing about trains is that they were born far ahead of their time. They are the very epitome of concentration—ultra-compact power and capacity—yet they were born in a time of spaciousness and dispersion.

Now that residential and industrial concentration—and the population—are building up at a fearful rate, the true time of the compact, high capacity train is here.

It is by far the most modern form of transportation in another sense, too. The industrial, automated future obviously belongs to guided movement, of which the train is a prime example.

Consider the automated factory. The very notion of such a factory begins with guided movement. Guiding conveyor lines. Guiding transfer machines. Guiding drill press carriages. Guiding stamping machine slides. Without the guidance, punched tape signals would mean nothing.

Of all forms of transportation, excepting the pipeline, only the train—with its flanged wheels traveling on steel rail, or one of its variations—is inherently a system of guided movement. (Imagine what a great thing it would be if cars, trucks and buses could somehow make their long runs with their wheels traveling in guiding ruts; if airplanes could somehow depend from weightless trolleys riding on cables suspended between skyhooks!)

All human progress in a material way depends on the reduction of work, and the train is one of the great reducers—one train replacing, say, 100,000 coolies carrying baskets, 10,000 men driving horsecarts, 500 men driving trucks.

Yet this marvelous contrivance—born so far ahead of its time—is widely held to be old-fashioned and obsolete. Actually, it's purest future. It's automation. We desperately need more of it, not less of it.

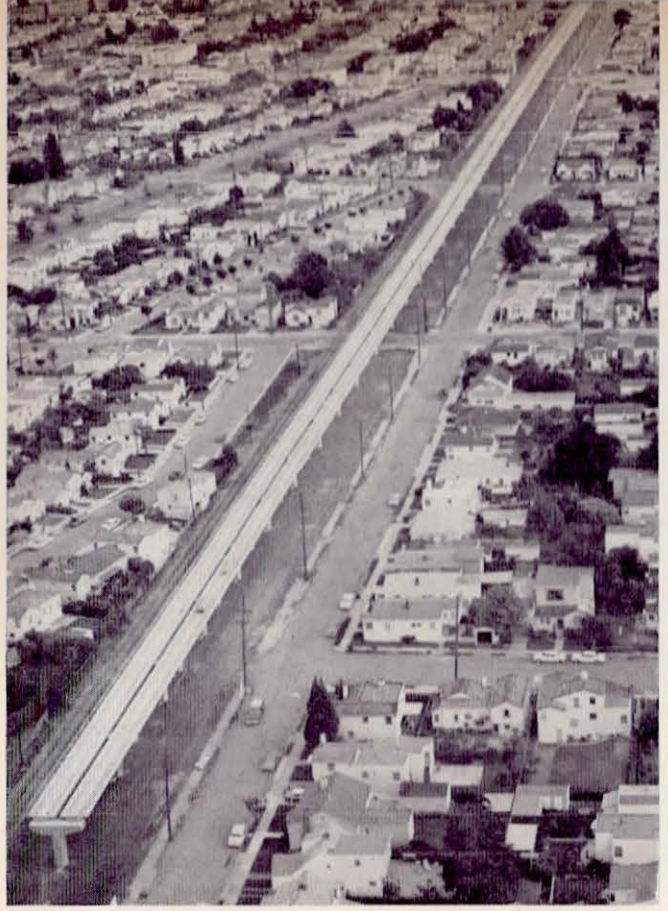
I am reminded of a legend of India. Our ancestors, tired of bruising their feet on rocks, were on the verge of attempting to cover the earth with skins. "But wouldn't it be wiser," counselled one of them, "to cover our feet instead?" He, says the legend, was the first guru.

Coming to the U.S.A. in the 20th century, wouldn't it be wiser to form our routes of narrow strips of steel rail than to cover the whole continent with proliferating, ever-widening bands of concrete?

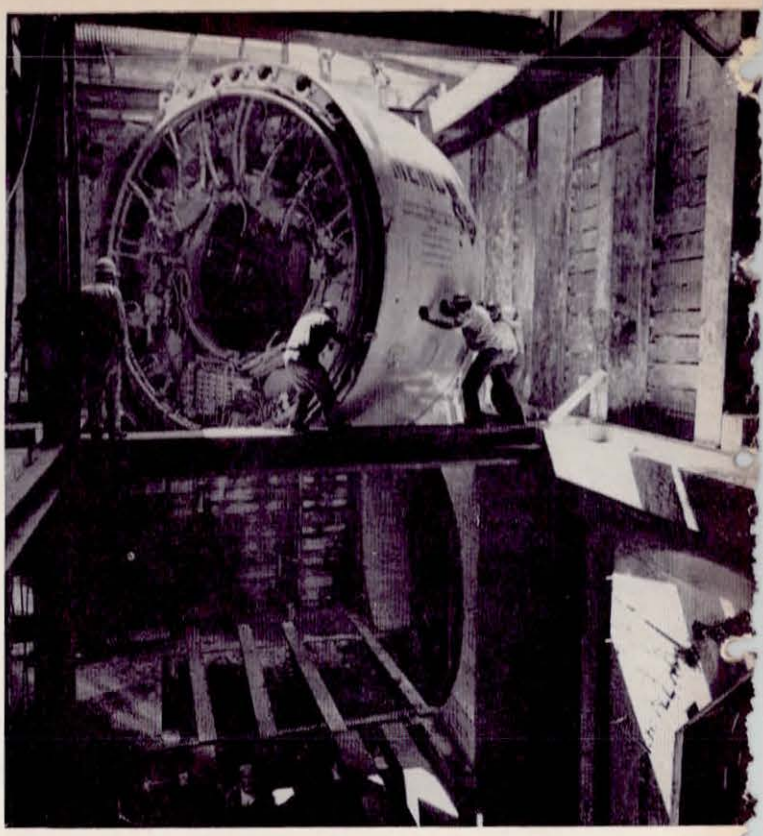
"Labyrinth" may have had the last word on the subject. After viewing with dismay the transportation mess as a measure of human failure, the picture closes on this hopeful note: "But the journey isn't over and the labyrinth has many routes."

This country has a number of problems that call for a number of solutions. But the terrible problems of choking congestion and highway destruction of the landscape are ones that our industry and only our industry can solve. "Labyrinth" was speaking in broad terms and metaphors, of course. But the railroad *is* the route through a dangerous part of the labyrinth.

George Dusenbury



LINES LEADING NOWHERE? Construction of the BART system is going ahead—but the nagging question is whether cash can be raised to complete it.



WORK BEGINS DOWNTOWN: Strained finances or no, the heart of the BART system is being built. A new-type boring machine is burrowing under Market St.

Transit hits a snag in California; BART and SCRTD are hurt

Bay Area Transit system may be cut back in size through lack of funds to complete the full 75-mile network. The legislature turned thumbs down on extra help for BART—for L.A. transit, too.

The cause of rapid transit in California has been dealt a body blow by the state legislature. There is little doubt that transit planning and construction will go ahead in both San Francisco and Los Angeles, but the road will be strewn with obstacles.

The roadblocks relate to money which it was hoped would be voted by the legislature. Six different bills were up for consideration in Sacramento at this session, all of them designed to provide funds for rapid transit in the state. Of these, three were given a serious chance, those known—after the names of their sponsors—as the Lanterman bill, Foran bill and McAteer bill. But they suffered the same fate as the other measures—death in committee.

In the interim, Bay Area Rapid Transit District has been left high and dry at a time when additional sources of revenues are sorely needed. Southern California Rapid Transit District's plans for financing its coming system will also be adversely affected.

BART officials pinned their hopes on passage of either the McAteer bill or the Foran bill. The former called for a 10-cent increase in tolls on the Bay Bridge, with an estimated $65 million accruing to BART as a result.

The latter measure would have raised motor vehicle "in-lieu" taxes (in lieu of property taxes) from 2% to 2.5%, with the difference to be applied to local transportation projects or other public works improvements, with transit getting priority. Perhaps $60 million would have reached BART that way.

Los Angeles transit officials on the other hand strongly supported the Lanterman bill, which would have made over $100 million available annually for local-option transportation projects. The money was to have come from gasoline taxes. SCRTD figured it would have gotten $38 million out of the $100 million pie each year.

Three main factors worked against transit supporters. One was the sensitive matter of applying motor vehicle funds, either from tolls or from vehicle taxes, to public transport. Although the constitutionality of this practice was established long ago, and the state is already committed to apply $180 million in Bay Bridge tolls to BART construction, the principle is still controversial politically. The Automobile Club of Southern California, the State Highway Users Conference and other highway-minded groups were aroused by the latest efforts to tap what they feel is "their" money, and became vocal in their opposition.

● **Cut the budget—anywhere.** Another adverse factor was the "let's-economize" mood of legislators in

Sacramento. Ronald Reagan was elected governor last year on a platform whose central plank was a vow to cut the state budget drastically. In the event, his first budget submitted to the legislature was the highest in the state's history—and the lawmakers were apparently not in the mood to saddle the over-all state budget with new programs on top of existing ones.

The third main factor, and an ironic one, was the fact that transit supporters failed to work together in pressing their claims before the state legislature.

San Francisco has a system under construction, Los Angeles is still in the planning stage; their needs are different, so the bills introduced on their behalf by local legislators were tailored to fit local situations. The result was that no solid front was formed in Sacramento to plead the transit case.

Where does this leave San Francisco and Los Angeles? Transit officials are, needless to say, greatly disappointed by these setbacks, but no one regards the present impasse as the end of the road.

● **Times may change.** For one thing, Gov. Reagan has expressed himself as being dissatisfied with the pace of transportation improvement in the state, and two months ago appointed a 21-man committee of prominent citizens to develop a master transportation plan for the state. BART and SCRTD sympathizers are on this committee. Also, all three ill-fated bills managed to pass at least one house of the legislature.

While there is hope that more money may be forthcoming in future sessions of the legislature, BART's position is especially difficult because construction is so far advanced, and some hard choices will have to be made right away.

About a year ago it was unofficially estimated that the amount of money available to build and equip the BART system—$1 billion—was $150-$180 million short of what would be needed. The discrepancy was attributed to sharp inflation and to unavoidable delays in getting started on building, which aggravated the inflation factor and ate up all the contingency reserve (RA, March 7, 1966, p. 16).

Capital grants from the U.S. Department of Housing and Urban Development and some previous aid from the state of California have done something to narrow the gap, and it is thought that the extra money needed will be on the order of $115 million.

● **Where to make the cuts.** In the absence of that money, several alternatives have been weighed by BART officials and their engineering consultants. The two most obvious choices are to cut back on the size of the system or to cut back on the level of performance and quality of surroundings.

The edge appears to have gone to the former proposal. David G. Hammond, BART's director of development and operations announced that his management is actively considering a reduction in the size of the system from 75 route miles to 57, and from 33 stations to 22.

The probable course of action will be to postpone work on certain sections, notably the leg of the system that would have reached through central Contra Costa county. Elsewhere, certain stations simply will not be built, although station sites will be reserved.

BART officials emphasize that if these cutbacks are made, it need not be for all time. If and when additional sources of revenue are found, the missing sections can be restored.

In the meantime, work is going ahead at full speed on the sections that do have priority. Until about a month ago, all construction work had been confined to the East Bay area and to the Trans-Bay tube. In the last week of July, though, work began in downtown San Francisco with excavations begun along Market Street, where the core of the system will be.

For the one-mile-long twin-bore tunnels stretching from 15th and Mission Streets to 8th and Market Streets, two boring machines of a type not seen before in th U.S. were built by Mine Equipment Manufacturing, and put on the project by the joint venture contractors, Morrison-Knudsen, Brown & Root, and Perini.

● **Cars up for bidding.** The transit-vehicle contract was tendered for bidding, with a decision due in November on who will build the first 250 cars. The advertising range for the 250-car order is $45-56 million.

The design remains much the same as that seen in the car mockup exhibited over a year ago—air conditioning, wool carpeting on floors, soft seats. Both aluminum and stainless steel may be bid on the car bodies.

There will be 125 "A" cars and 125 "B" cars in the first batch. "A" cars will be 75 ft long, "B" cars 70 ft long; car width is 10½ ft, car height the same, and seated passenger capacity is 72.

Planners for the SCRTD are also going on as before—in their case preparing studies for a 64-mile system in Los Angeles that would cost $900 million or more. Much of this could be raised through bond issues, some through federal aid.

State aid, direct or indirect, is also being banked on. But for the moment, it remains a question mark. ■

Los Angeles needs transit —for selfish reasons

The state lawmakers in Sacramento have given some aid to Los Angeles rapid transit plans—but on a one-shot basis: They assigned $3.9 million in off-shore oil revenues to SCRTD for planning purposes.

The legislature's present lukewarm attitude toward extending further aid might be explained by the feeling that traffic problems are exaggerated. One recent study (RA, March 13, p. 40) argued that the Los Angeles freeway actually works fine, and serves the city's needs well.

But does it?

A nationally known real estate developer with heavy investments in Los Angeles warned a Southern California businessmen's group recently that unless something is done to help public transportation soon, Los Angeles will strangle in its own auto traffic.

Robert V. Tishman is president of Tishman Realty and Construction, which has offices in New York and Chicago, as well as Los Angeles. His firm has built nine office buildings, two apartment houses and a hotel in Los Angeles, and has begun work there on another office structure with 800,000 sq. ft. of space.

But he told the luncheon group that his firm had to forego two more projects there because of parking problems.

According to Tishman, "Parking is non-profitable. For every foot of profitable space we must supply twice as much non-profitable space. Land is thus eaten up in great non-productive chunks. Buildings often cannot be produced because the parking costs will not permit it."

He praised the practice in eastern cities where public transportation is encouraged, and pointed out that the present metropolitan population of Los Angeles would swell from 9 million to 14 million by 1980. If automobile traffic keeps pace with that growth, Tishman said, builders won't be able to afford to put up new commercial buildings because of the tremendous amount of parking space that will be required.

Is rapid transit in

FLAWS IN THE PICTURE

Half of downtown St. Louis is now devoted to parking garages and parking lots (arrows)—one reason behind a massive, nonpartisan drive to bring rapid transit into the picture for the whole metropolitan area (see map, above).

the picture for St. Louis?

Not yet—but the day may not be far away. A feasibility study is under way, and the idea has powerful political backing.

For 80 years, St. Louis has been busily turning out rapid-transit vehicles to ease the traffic aches and pains of the nation and the world.* Now the gray old queen of the Mississippi, struggling to regain some of her ebbing vitality, may be ready to swallow some of her own medicine.

After a frustrating flirtation with concrete and rubber as a final solution, St. Louis and six surrounding counties —working through the East-West Gateway Coordinating Council and the Bi-State Development Agency — have finally embarked on a $450,000 rapid transit study.

By 1970, if the present timetable is followed, a firm proposal will be ready for the voters. By 1975, the first transit trains could be streaking up, down, over and under the 3,500 square miles of Missouri and Illinois that make up the sprawling urban complex that is called Metropolitan St. Louis.

Getting that first train running isn't going to be easy. The future is clouded with ifs, buts and, importantly, hows.

—How do you pay for a system whose minimum estimated cost—$500 million —amounts to a whole year's revenues for the State of Missouri?

—How do you come up with a single master plan that will satisfy 225 separate municipalities and 750 local taxing districts?

● **The big guns are heard.** Right now, nobody pretends to know all the answers. That's why a prestigious group of consultants—the national joint venture organization of Parsons, Brinckerhoff-Tudor-Bechtel, working with the St. Louis firm of Sverdrup & Parcel and Associates—has been hired to conduct a three-year feasibility study.

But the big guns—political as well as civic — have been heard from, and they're lined up solidly on the side of rapid transit. St. Louis Mayor Alfonso Cervantes and St. Louis County Supervisor Lawrence Roos are leading the attack. Their target is rapid transit by 1975, if possible; by 1980 as a must. The alternative, as St. Louis Traffic Commissioner Ellis Henry bluntly puts it, is "wall-to-wall automobiles."

● **View from the top.** Ride to the top of Gateway Arch — the majestic new stainless steel memorial to the Louisiana Purchase that soars 60 stories over downtown St. Louis—and you see what he means.

The view from the top is a stirring one of a dying city come alive again. Below lies the historic Old Courthouse where the Dred Scott case, a landmark in the slavery battle, had its beginning. Just about everything else in the picture is new: the gleaming bowl of Busch Stadium, new office and apartment buildings. A new and vibrant spirit of St. Louis is evident everywhere.

But there is a disturbing element in the picture. The close observer perceives that several of these elegant new buildings are nothing more than handsomely-designed parking garages; and an astonishing amount of acreage is gobbled up by parking lots.

● **Shocking pink.** How much of the downtown area (you ask a St. Louis businessman sharing the view from the top of the Arch) is devoted to the stabling of automobiles?

As much as one fourth, he guesses gloomily.

He's off—way off.

Go to the office of Traffic Commissioner Henry and ask the same question. He pulls out a map of the downtown core area and explains that those areas tinted pink are for parking.

At least one half is pink—a shocking pink to city planners and land-use experts.

(The rapid transit study is part of a far-reaching survey whose central theme is Land Use and Transportation. The whole project begins to make a lot of sense.)

● **"A traffic nightmare."** Commissioner Henry points out that on an average week day 190,000 vehicles, give or take a thousand, enter downtown St. Louis. He takes a certain pride in the observations of casual visitors that traffic in St. Louis seems to move more smoothly than in most other urban areas of comparable size. But he fears that this is at best a temporary illusion.

"Ten years from now, unless some radical solution to the problem can be found, the rush hour traffic in St. Louis, and throughout the metropolitan area, will create traffic congestion and a daily traffic nightmare," Henry recently told a television audience. (Ellis Henry, the man who has to cope with today's traffic problems, and worry about tomorrow's, never misses the chance to put in a plug for rapid transit. His feelings on the subject are summed up in the title of a talk he recently made before the Engineers Club of St. Louis: "20th Century Traffic, 19th Century Streets, and 18th Century Thinking.")

● **Looking to 1980.** If officialdom is so committed to the idea of a rapid transit system for metropolitan St. Louis, then why hasn't something been done about it long before this? "There's been one big barrier," points out a local industrialist. "It's public apathy."

That apathy most definitely is not shared by Mayor Cervantes and County Supervisor Roos.

In terms of politics and personality, the two most powerful men in metropolitan St. Louis are at opposite poles —flashy, liberal, big-city Democrat Cervantes; soft-spoken, conservative Republican Roos. But they are in firm agreement on the need for a more efficient mass transit system than is now provided by the 15 privately-owned bus companies that were brought together into a single publicly-owned operation a few years ago by the Bi-State Agency.

Cervantes and Roos both look ahead not only to tomorrow but to the day after—and as experienced politicians and businessmen they know that it will take a decade to bring to fruition any seeds planted today.

The population of metropolitan St. Louis now stands at around 2.5 million, of which two thirds is clustered in the

*Since 1887, St. Louis Car—now a Division of General Steel Industries—has built some 15,000 urban transit vehicles, of which 1,100 were shipped overseas.

"What are our transit needs going to be 20, 30, 40 years from now?"
Missouri Gov. Warren Hearnes

City of St. Louis and in St. Louis County (the city seceded from the county in the late 19th century and they are now separate governmental entities.)

By 1975, according to one unofficial estimate, the metropolitan-area population will have passed 3 million; and by the year 1980, 4 million.

• **A 90-10 formula?** It was Mayor Cervantes who, at the recent Conference of Mayors in Honolulu, unveiled the boldest transit proposal yet to come from a U.S. mayor. It was this: Earmark 25% of the funds currently being poured into federal highways for the building of urban mass transit systems —and give these systems the same 90-10 formula of aid that is now paving the countryside with interstate highways.

Cervantes presides over a city of 700,000 that has lost population heavily in the last decade (the 1950 population was 857,000) and has suffered the blight of ghettoization. The core city is now entering a recovery phase: Cervantes sees efficient transporation as an important part of this recovery.

• **Not just a downtown problem.** County Supervisor Roos is, on the other hand, the governmental head of a prosperous, middle-income county (the nation's 10th richest in per-capita income) which has grown from 270,000 population in 1940 to 900,000 today. Roos takes a far from parochial view of transportation needs. As chairman of the East-West Gateway Coordinating Council — a quasi-governmental body made up of 13 high-ranking officials of the Missouri counties of St. Louis, St. Charles and Jefferson, and the Illinois counties of Monroe, St. Clair and Madison, as well as the City of St. Louis—Roos takes a grand overview that convinces him of the need for a rapid transit system that will serve the needs of the whole metropolitan area.

But he is understandably most concerned with his own big backyard—and there, Roos sees a worsening problem of lateral movement, between suburban clusters, that cannot be solved by what he calls "our picturesque country highways."

"We have a real problem of congestion," says Roos. "For example, 45,000 people work at McDonnell-Douglas in the north end of the county, and a lot of them live in the south end. We have the big Ford and Chrysler assembly plants. Our big residental and business centers must be tied together by efficient transport. We would have our heads in the sand if we weren't making plans now to meet our total transportation needs in the years ahead."

• **The view from Jefferson City.** Cervantes and Roos and Henry aren't alone in their concern over the problems of urban mass transportation. Surprising support has come from the traditionally rural-dominated state capital.

The office of the Governor of Missouri overlooks a pastoral scene dominated by the Missouri River and mile after mile of cornfields, and the occupants of this stately room have not always looked with affection at urban centers like St. Louis and Kansas City. But the present governor, Warren Hearnes, an anti-establishment Democrat, is a maverick of a different color.

Governor Hearnes is heavily and publicly committed to hauling Missouri's transportation system not only into the 20th century—but possibly even, as he recently told Railway Age, into the 21st. "I may sound Buck Rogerish," he said, "but I'm interested in what our transit needs are going to be 20, 30 or 40 years from now. We want to look at everything."

The Governor's most pressing trans-

"20th century traffic, 19th century streets, 18th century thinking"
Traffic Commissioner Ellis Henry

"25% of highway funds should be diverted to rapid transit"
St. Louis Mayor Alfonso Cervantes

portation problem now is getting Missouri an adequate system of highways. He has, at the same time, shown considerable interest in urban transit. Under his direction the Office of State and Regional Planning and Community Development made a comprehensive study out of which came a startling report entitled, "Preparing for the Future of Missouri."

Urban mass transit got an important place in the findings that were submitted to (though they have not yet been officially endorsed by) Governor Hearnes.

Some excerpts show why this report out of rural Jefferson City made such big headlines in the St. Louis newspapers:

"As much of one-third of metropolitan core areas are devoted to the auto [an understatement, as it turned out] and this is still not enough to end congestion and provide accessible parking. The freeways are operating above capacities causing frustration, loss of time and accidents, air pollution and noise. The problem will be further compounded in the future when five giant jets unload passengers simultaneously. The equivalent of 2,000 automobiles would be required to transport these people from the airport to their destination. There is the added problem that in the next 20 years plans proposed to provide for auto travel by freeways will reach monumental if not impossible proportions. . . .

"The State of Missouri could build a high-speed, low-cost mass transit system for its major metropolitan areas utilizing the same financing approach as proposed to finance the turnpike system. . . . The system would have to be built, promoted and operated along airline techniques and would have large landscaped lots, airline type

terminals, service and rolling stock and low fares. . . .

"The system if financed from moderate to low fares under the revenue bond concept would probably require a certain allocation of funds from the highway user's fund. The use of highway user's fund can be justified for this purpose in view of the fact that the auto is the crux of the problem. The auto mode of travel is currently operating on tax free land and it is becoming increasingly impossible to construct parking lots and freeways to meet demands of today and 20 years from now (one high-speed transit lane is equal to 16 lanes of a freeway handling automobile traffic). If auto travel is to continue in major metropolitan areas, more efficient means must be devised to handle the traffic flow."

● **Public attitudes.** For all of the enlightened leadership that is being brought to bear on the problem, there remains the barrier of public apathy. But that barrier is under heavy attack.

Both St. Louis newspapers — the liberal Post-Dispatch and the conservative Globe-Democrat — are rapid-transit advocates. KMOX, the CBS radio-television affiliate, did a transit documentary that is still being talked about. KSD, the NBC station, has a consistent and ardent supporter of rapid transit in the person of Howard deMere, one of the area's most popular television and radio personalities. DeMere tries to put the problem to his listeners in terms they will understand. "People don't really understand the economics of automobiles," he contends. "Ask them if they're willing to spend $2.50 a day to get back and forth to work, and they're horrified—yet that's what it costs them to drive their automobiles."

● **Transit timetable.** The present rapid-transit feasibility study is a project of the East-West Gateway Coordinating Council (whose executive director is Eugene Moody), working through the Bi-State Development Agency (headed by Col. R.E. Smyser). It is being paid for by the State of Missouri ($150,000) and the Department of Housing and Urban Development ($300,000).

"People don't really understand the economics of automobiles"
KSD's Howard deMere

"We would have our heads in the sand if we weren't planning ahead"
County Supervisor Lawrence Roos

The study will be accomplished in four phases: (1) Weighing existing systems — i.e., Bi-State's 1,000 buses which now carry about 8 million riders a month on 130 lines—against movement patterns and arterial flow; (2) testing of alternative systems and arriving at an optimum; (3) detailing the optimum; (4) refining the plan and preparing a final report—due early in 1970.

How do the bus people feel about the idea? Says S. Carl Robinson, administrative officer for the Transit Services Corp., which operates the bus system for Bi-State: "There's no question about it—a rapid transit system which would complement our present surface operations is needed, and the sooner the better."

● **How much, and where?** How many miles of rapid transit would metropolitan St. Louis need—and what would be the principal routes? Nobody, publicly, wants to try to preguess the findings of the consultants. But nearly everybody has his own ideas.

Many feel that an initial line should connect the core city with the busy area around Lambert Field and McDonnell-Douglas. This would involve a 15-20 mile route extending northwestward from Gateway Arch to Hazelwood, via Ferguson, Normandy and Florissant.

A westward line, from the Arch to Chesterfield, via St. Louis University, Washington University and Clayton, is also talked about at businessmen's lunches. A southwestward line, from the Arch to Fenton, via Maplewood, Webster Groves and Kirkwood, has its band of supporters.

A short line from the Arch across the Mississippi to East St. Louis would probably be in order—and a north-south line on the eastern bank of the river, connecting Belleville, East St. Louis and the Tri Cities (Madison, Venice and Granite City) has its supporters.

So the system could be 15 miles—or it could be 75 miles. Financing could be the decisive factor.

● **Who pays?** Massive federal aid is probably going to be required, and on a scale far beyond that now available. Local leaders are banking on a continuing warming-up of the mass transit climate in Washington. By the time St. Louis is ready to dig, they hope that the kind of aid proposed by Mayor Cervantes (and also supported, in only slightly different form, by a growing group of state, local and federal officials across the nation) will have become a reality.

● **The Cervantes plan.** Mayor Cervantes put his proposal before the Conference of Mayors in the form of a resolution headed "Mass Transportation." Its salient points were these:

"Billions of dollars in federal funds are expended yearly for the construction of high-speed expressways throughout the nation. . . .

"Increased highway construction contributes to urban traffic congestion, leads to a misuse of land, takes land off the tax rolls, and causes increased municipal costs for parking facilities, access streets and ancillary services. . . .

"There is a serious deficiency in the provision of rapid mass transit facilities which can be solved with federal assistance. . . .

"A more proper mix of transportation methods must be devised to meet the needs of the nation's metropolitan areas in which roughly 70% of the nation's population lives. . . .

"Therefore . . . 25% of federal funds currently being expanded for the construction of expressways [should] be diverted to the construction of rapid transit systems in metropolitan areas . . . . 90% federal funding of rapid transit systems [should] be incorporated in such federal rapid transit systems legislation."

It was a bold proposal and a controversial one—but St. Louisans tend to think boldly these days. They may be even a little ahead of the times. But 1980 is on the way; and that big, no-longer-sleepy town upon the river doesn't intend to be caught napping. ■

LUTHER MILLER

AS THE EDITOR SEES IT...

THE PERSISTENT SENATOR PELL—Being pro-passenger train has suddenly become smart politics—and many a politician makes a ringing speech in defense of the steel wheel on the steel rail, and then goes on to some other burning issue of the day, like motherhood or the flag. Well, even fair-weather friends aren't to be scorned by an industry still shivering from the days of the big freeze in Congress (where an occasional chill wind still blows).

Not such a politician, however, is Senator Claiborne Pell of Rhode Island. Years ago he stirred up the White House and Congress on the need for high-speed rail service in the Northeast Corridor—and he didn't quit pestering friend, foe and neutral until they did something about it. Senator Pell is as responsible as any other individual for the fact that the high-speed project is being brought to completion.

It is a pleasure (although no surprise) to report that Senator Pell remains a staunch friend of rational transportation even when there are no headlines to be grabbed. The other day he spoke out strongly in favor of restoring funds slashed from the Department of Transportation's high-speed ground transport program—and he seized the occasion to emphasize again the vital role that railroads can and must play in the balanced and efficient movement of people.

FOR THE (CONGRESSIONAL) RECORD—As long-time admirers and supporters of the Senator from Rhode Island, we are especially pleased that he was able to buttress his most recent argument in the Senate with an article (by Publisher Bob Lewis) that appeared in Railway Age last Jan. 23. That was the article on Japan's New Tokaido Line that began with these words: "Those people who say that orthodox railway technology is on its way out had better think twice. . . ." It is now a part of the Congressional Record.

With the leadership of men like Senator Pell, people *are* beginning to think twice. The railroads—and the traveling public—are in debt to him.

NEEDED: A TRANSIT ADVOCATE—What our cities need is a champion in Congress who will plead the cause of urban transportation with the ardor and persistence that Senator Pell has devoted to the inter-urban, megalopolitan cause.

Four eastern governors—Rockefeller of New York, Shafer of Pennsylvania, Hughes of New Jersey and Terry of Delaware—are on record as favoring some kind of federal formula (similar to the 90-10 highway formula) to meet urban transit needs. The proposal was put before the Governors' Conference last year; it got nowhere officially—but it got people to talking and thinking.

Now Mayor Alfonso Cervantes of St. Louis, as reported in preceding pages in this issue, has come up with a similar plan. The Conference of Mayors didn't buy his proposal—but, again, an important seed was planted.

We believe that seed is going to come to fruition one day. But the ground must be carefully prepared. And we sorely need someone with a green thumb in Washington to help.

Most highway interests are firmly opposed to the idea of diverting any of "their money" to other forms of transport, contending that all monies accruing from highway taxes must be plowed right back into more and seemingly endless fields of concrete. As we have remarked editorially in the past, that's like saying that all whiskey taxes ought to go for new-saloon construction.

JUST 'ROUTINE'—Meanwhile, people have become so used to multi-billion dollar highway appropriations that they no longer are even considered newsworthy. The announcement last week that $4.8 billion of highway funds had been allocated to the states for the year commencing next July 1 earned only 13 lines on page 5 of the Wall Street Journal. It was, as the WSJ pointed out, a "routine apportionment."

Fifth birthday for PATH

Friday, Sept. 1 was not much different from any other day for Jersey-bound commuters on the Port Authority Trans-Hudson system.

But it was the fifth anniversary of the takeover of what used to be the Hudson & Manhattan Railroad between New York City and New Jersey—and regular travelers on the system will have noted quite a few changes from the old days.

PATH riders travel in air-conditioned comfort in a new aluminum car fleet; equipment breakdowns and delays are far less frequent; schedules have been toned up—all a far cry from the way things used to be.

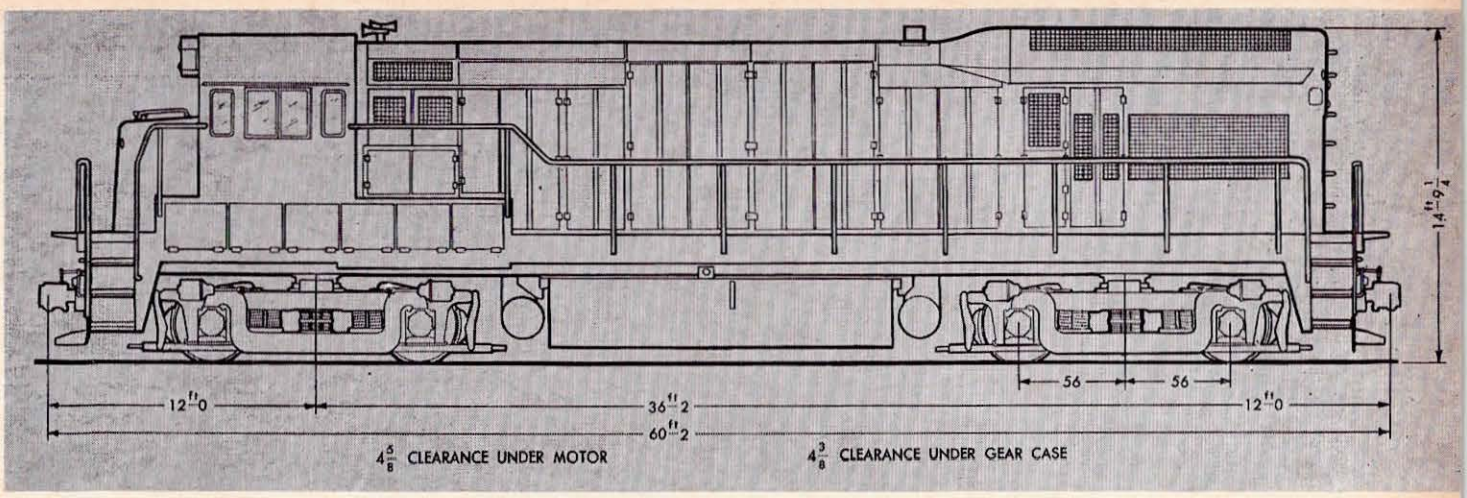
The old H&M had been in operation since 1908, but fell on hard times after World War II, with steady declines in traffic, obsolete rolling stock and run-down facilities. It went into bankruptcy in 1954, and the downturn got even steeper.

In 1962, the New York and New Jersey legislatures empowered the Port of New York Authority to take over the H&M, modernize it and operate it. On Sept. 1 of that year, the Port Authority's new subsidiary, PATH, officially took over the property and began a rehabilitation program that has seen almost $70 million spent or committed for overhaul of the road.

The most dramatic change came at the beginning of 1965, with the delivery of the first cars in the new 162-car fleet of air-conditioned vehicles ordered from General Steel Industries the year before. This enabled PATH to retire the famous—or infamous—"black boxes" that had been rattling around the system for a generation or more.

Another big change came this year with introduction of the Aldene Plan, which made it possible for Jersey Central commuters to continue into New York City over PATH lines. An extra 44 GSI cars were delivered for this purpose. Together with 47 GSI cars acquired in 1955, they constitute the only completely air-conditioned fleet on a U.S. rapid transit system.

Still more are on the way—a Journal Square transportation center in Jersey City, and a new Hudson terminal in downtown New York, as part of the coming World Trade Center. ■



HIGHEST HORSEPOWER of any four-axle domestic design has been built into General Electric's U33B diesel unit.

GE adds 3,300-hp diesels to its line

Seaboard Coast Line to get first four-axle U33B units for high-speed freight service. Companion six-axle unit, the U33C, is also available.

The Seaboard Coast Line is scheduled to take delivery of the first 16 General Electric four-axle, 3,300-hp U33B locomotives in December. Commenting on the order SCL President W. Thomas Rice said, "These new GE locomotives will be especially suited for high-speed freight service throughout our 9,600 mile system."

A companion six-axle design, the U33C, is also available GE said when announcing the availability of the new locomotives (RA, Aug. 14, p. 7).

• **Third power increase.** Since first entering the mainline diesel-electric locomotive field in April 1960 with the 2,500-hp U25B unit GE has made three increases in horsepower ratings. Horsepower was raised to 2,800 hp in the U28 designs (first delivered early in 1966) and late last year to 3,000 hp in the U30 models. The latter will continue to be available.

Olaf F. Vea, general manager of GE's Locomotive and Parts Department, said GE pioneered the U25 in 1960 because "We believed a definite need existed in the nation's railroad industry for a locomotive with greater horsepower per axle capability. Developments throughout the industry during the past five years have substantiated our original conviction. We are continuing to improve locomotive horsepower ratings in proven steps consistent with unit reliability and ease of maintenance".

The U33B is the highest horsepower four-axle unit yet announced by domestic builders. The rating is exceeded in single-engine models by Electro-Motive's six-axle 3,600-hp SD-45 and Alco's recently announced six-axle 3,600-hp Century 636 (RA, July 31, p. 50). These builders have to date, however, announced only a maximum of 3,000 hp in four-axle models. At 3,300 hp for four axles the U33B can deliver 825 hp per axle.

• **Engine speed up.** Horsepower was boosted to 3,300 through engine modifications without changing the 9-in. x 10½-in. bore and stroke dimensions of earlier GE models. However, the full load speed of the 16-cylinder, four-stroke cycle, turbocharged engine has been increased to 1,050 rpm, up 25 rpm over that of the U30 models.

• **Other changes.** GE said other engine and auxiliary changes in the new model include:

—A higher-capacity fuel system with improved pumps and injectors, combined with new valve timing, for operation at 3,300 hp with low specific fuel consumption.

—Larger radiator capacity that lowers temperatures even at the higher horsepower rating.

—A new diesel-engine air supply system that increases reliability and reduces maintenance. Better accessibility to the primary filters is obtained by locating the primary air cleaners on the filter compartment door.

—Elimination of starting motors by equipping auxiliary generators with windings to permit starting the engine with storage battery power.

The U33 locomotives utilize a GTA-9 alternator and a full-wave rectifier designed to match the GE-752 d.c. motor characteristics and permit full-field operation for the entire speed range.

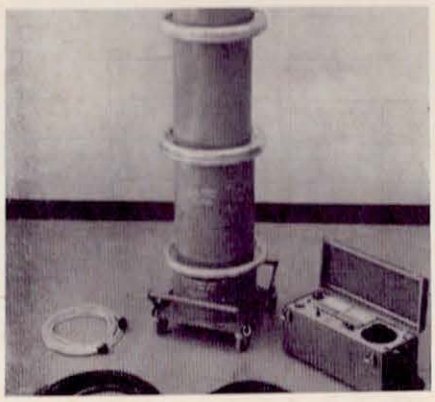
Sand capacity of the U33 is 60 cu. ft, compared with the 48 cu ft carried by the U30. As in all GE designs, the underframe piping is on one side, the wiring on the other.

Speed-tractive effort curves for the new designs have not been made available. However, the U33B has a maximum speed of 75 mph and develops 54,100-lb tractive effort; the U33C, a 65-mph speed and 90,600-lb tractive effort. Minimum weight of the U33B is 256,000 lb and the U33C, 363,600 lb. ■

NEW **PRODUCTS** REPORT

Electrical Tape (RA-1)

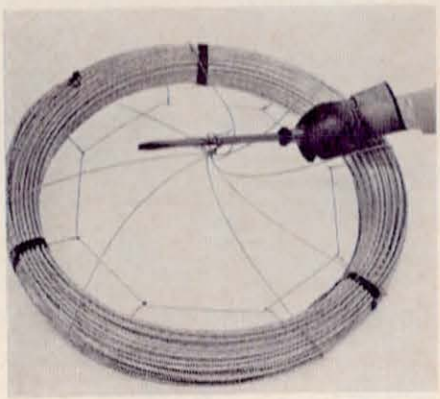
Scotch vinyl plastic electrical tape is now available in ¾"-wide rolls 20 ft in length. The tape is designed for identification color coding, safety marking and other applications where viewing distance requires greater visibility. The tape is UL listed electrical grade, 7 mils thick, that can also be used as a general purpose insulation. It comes in red, white, blue, yellow, green, orange, gray and brown. *3 M Company.*



Test Set (RA-2)

This 150 kv DC dielectric test set consists of three 50 kv modules mounted on a transformer unit. The control unit is separate. The ratings are: 50 kv and 10 ma with 1 module, 100 kv and 5 ma with 2 modules, and with 3 modules 150 kv and 3 ma.

Applications include non-destructive and breakdown dielectric tests on electrical insulating materials, individual insulation structures and insulation of electrical equipment. *James G. Biddle.*



Wire Dispenser (RA-3)

A new device puts an end to runaway coils and takes the danger and struggling out of coiled strand and cable handling.

The guy wire dispenser is a lightweight and will accommodate coils of 200 to 500 ft in strand sizes up to 7/16". It can be used with strand, wire, wire rope, drop wire, coaxial cable etc. Simple in design, the dispenser is easily applied to a coil. *Preformed Line Products Co.*

Data Modem (RA-4)

Where distortion problems have previously prevented high speed systems from operating, Modem 4400 operates by utilizing only an 800 Hz portion of the 3 kHz bandwidth. Limited to this narrow bandwidth, impulse response time is stretched and the amplitude of the impulse response is reduced, making impulse noise interference insignificant. Unused portion of bandwidth can be used for simultaneous transmission of up to six channels of teletype circuits on the same voice grade line. The 4400 is a full duplex, synchronous data modem consisting of a data transmitter and receiver.

All signal connections are made through two connectors. The modem contains its own regulated power supply. Power line connection is made through a three-wire receptacle attached to the modem. An alternate. four-position terminal strip is provided for making telephone line connections. Cabinetry is designed so that the modem housing can be readily removed in the field, permitting easy access to circuits for troubleshooting. *Milgo Electronic Corp.*

Switching System (RA-5)

A new solid state code system providing 8 or more simultaneous switching commands for dispatch via telephone, telegraph, metallic, or microwave circuits, uses time division multiplex. Transmission of eight switching commands is accomplished within .16 of a sec at high speed. Features: modular design, 5-year warranty, minimal maintenance and free factory training for customer technical and engineering personnel. *Moore Associates.*

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John F. Dunseth, Jr.
Burlington

John E. Slaughter
GN

PEOPLE

BURLINGTON.—John F. Dunseth, Jr. appointed director of industry marketing. He was previously manager of stone, clay and glass industry products, **Baltimore & Ohio.**

Gene A. Davidsmeyer, senior financial analyst, named to the newly established position of manager-financial analysis, Chicago.

Henry P. Marohnich, research analyst, Chicago, advanced to director of market research there.

James G. Edwards, superintendent, McCook, Neb., promoted to terminal superintendent, Chicago-Aurora division, Cicero, Ill.

CANADIAN NATIONAL.—Along with his other duties, **D. F. Mills,** special projects officer, is assigned direction of the Organization Development Program, Great Lakes Region, Toronto, succeeding **E. A. Ash,** promoted. Abolished position of co-ordinator, Organization Development Program.

A. M. Christie, claims agent—office assistant, appointed assistant manager, general claims, Toronto.

E. H. Gilliatt, transportation planner, appointed transportation planning officer—system, Montreal. **E. M. Halonquist,** coordinator, Terminal Management Systems, appointed transportation planning officer—system. **Dr. T. W. Fairlie,** coordinator, transportation systems, appointed transportation planning officer, Montreal. **B. E. Horsman,** transportation assistant, Toronto, named transportation planning officer, Montreal.

M. C. O'Rourke, freight sales analyst, appointed customer research officer, St. Lawrence Region, Montreal.

J. O. G. Comeau, assistant general superintendent transportation, appointed general superintendent transportation, St. Lawrence Region Montreal, succeeding **R. E. McKague,** promoted.

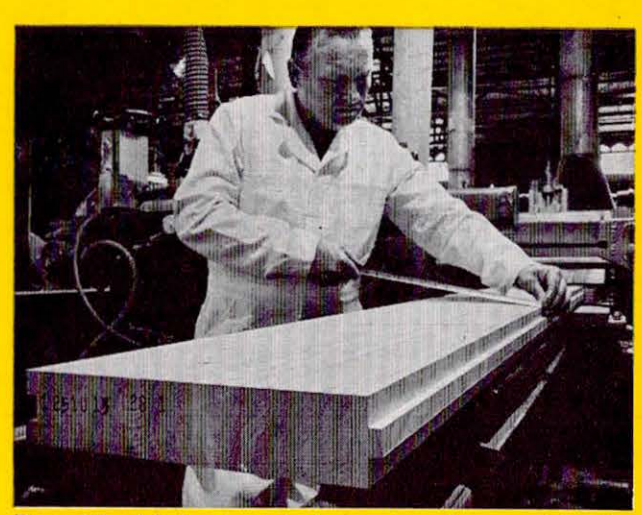
J. W. Clarke, engineer maintenance of way, St. Lawrence Region, appointed engineer track maintenance—system, Montreal, reporting to **R. G. Maughan,** assistant chief engineer—maintenance.

K. W. Sewell, personnel officer, Prairie Region, appointed employee relations officer—engineering—system, Montreal, reporting to **H. R. Beck,** assistant chief engineer—administration.

GREAT NORTHERN.—John E. Slaughter, assistant director, systems and programming, advanced to director, systems and programming.

LONG ISLAND.—C. D. Davis, engineer of track, Jamaica, N.Y., promoted to assistant chief maintenance officer—track and structures. **George H. Winter,** staff engineer—track, suc-

DEPEND ON BRUCE



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ceeds Mr. Davis as engineer of track. **Robert A. Hazan,** assistant engineer-signals and electric traction, named industrial engineer-maintenance of way. **Stewart L. Staples,** assistant freight trainsmaster, promoted to industrial engineer—transportation. **Martin W. Witczak,** supervisor of cost reporting, named supervisor of mechanical expenditures.

LOUISVILLE & NASHVILLE.—Rafael C. Goyeneche, Jr. named to the newly created position of manager, international commerce, with headquarters at New Orleans. He was formerly associated with the commerce and trade division, **Louisiana Department of Commerce and Industry.**

MILITARY TRAINING MANAGEMENT & TERMINAL SERVICE.—Rear Admiral Elliott Bloxom, USN, appointed deputy commander for operations, MTMTS. Rear Admiral Bloxom was formerly commander, Naval Supply Center, Pearl Harbor.

MISSOURI PACIFIC.—George A. Peach, Jr., general freight agent, St. Louis, retired Sept. 1, after 47 years' service.

MISSOURI PACIFIC-TEXAS & PACIFIC.—E. F. Becktame appointed general auditor, St. Louis.

MONON.—Dean L. Creighton appointed district sales manager, Cleveland, succeeding **Richard A. O'Brien,** transferred to Indianapolis, to replace **Horace E. Harlan,** on leave of absence for reasons of health.

NEW HAVEN.—Robert P. Wilson, assistant general real estate agent, New Haven, Conn., appointed general real estate agent, succeeding **Bradford W. Thompson,** retired after 38 years of service. **W. Russell Bottomley,** real estate agent, Boston, succeeds Mr. Wilson.

NORFOLK & WESTERN.—Cecil R. Purdum, assistant vice president—sales, New York, transferred to Roanoke. **Thomas L. Davis,** southern traffic manager, Atlanta, Ga., named general traffic manager—sales, Pittsburgh, succeeding **Patrick D. Donahue,** appointed general eastern traffic manager, New York, a new position. **Lyle K. Rhoads,** assistant traffic manager, Chicago, transferred to Atlanta to succeed Mr. Davis.

Ralph E. Kieser, superintendent, Muncie division, named superintendent, Bison Yard, Buffalo, a new position. **Daniel J. Pyne,** general yardmaster, Bellevue, Ohio, named terminal trainmaster, Bison Yard, a new position. **Robert L. McFaddin,** computer services analyst, Roanoke, succeeds Mr. Pyne. **Maurice Post Anglen,** superintendent, Kansas City terminal, succeeds Mr. Kieser at Muncie. **Jean E. Lyon,** assistant superintendent, Scioto division, promoted to succeed Mr. Anglen. **Robert M. Milcik,** assistant superintendent, Pittsburgh division, transferred to the Scioto division, succeeding Mr. Lyon. **Joseph P. Watters,** trainmaster, Pittsburgh, promoted to assistant superintendent, Pittsburgh division. **Michael A. Carone,** trainmaster, Decatur division, transferred to the Pittsburgh division. **Donald L. McBride,** assistant trainmaster, St. Louis, promoted to trainmaster, Frankfort, Ind. **James T. Quarles,** junior engineer, Roanoke, succeeds Mr. McBride as assistant trainmaster, St. Louis.

REA EXPRESS.—William B. Foote appointed vice president and general manager, Eastern Lakes Region, Detroit, succeeding **Fred V. Kraft,** who retired June 30. **Oren L. Lewis,** manager, methods and analysis, Technical Services and Equipment Department, New York, succeeds Mr. Foote as director, Prevention & Security Services Division there.

Martin Whitten, assistant vice president—sales, Marketing—Sales Department, appointed assistant vice president in charge of the newly created Transportation Services Division. **Philip T. Tenenbaum** named director, market planning. Mr. Tenenbaum was formerly senior market analyst, United Air Lines, Chicago.

Daniel J. Christie appointed director, personnel development, succeeding the late **Charles J. Prange,** who died May 8.

SOUTHERN PACIFIC.—Joseph J. Willis, superintendent of transportation for SP's lines west of El Paso, Tex., promoted to general superintendent of transportation-system. **O. D. Goodwill,** assistant superintendent, San Joaquin division, Bakersfield, Calif., succeeds Mr. Willis.

E. P. Ahern, assistant manager personnel, San Francisco, appointed assistant to vice president, with responsibility for handling the position evaluation and salary administration program.

TRANS-CONTINENTAL, WESTERN, AND SOUTHWESTERN RAILROAD PASSENGER ASSOCIATIONS.—Hugh B. Siddall, vice chairman, elected chairman, effective Nov. 1, to succeed **Earl B. Padrick,** who retires Sept. 30 after more than 47 years' service. Mr. Siddall's successor is **Norman S. Landgraff,** manager, **Western Railroad Military Bureau.**

WESTERN MARYLAND.—L. F. McBee, sales representative, Baltimore, named assistant district sales manager there, succeeding **R. M. Shilling,** who retired Aug. 31, after more than 41 years of continuous service. **W. B. Lanier,** chief clerk, district sales, Baltimore, named sales representative there.

Jesse H. Wyant, assistant division sales manager, Hagerstown, promoted to division sales manager there, succeeding **Carroll E. France,** who retired Aug. 31, after 50 years' service. **Arthur L. Towson,** sales representative, named division sales representative, Hagerstown.

TRANSIT

Seymour Kashin has been appointed general manager of the **Marin County Transit District.** He was formerly director of the Queens-Long Island Mass Transportation Demonstration Program.

Howard G. Cumler retired Aug. 25 as superintendent of transportation, **Cleveland Transit System,** after 41 years of service with CTS and predecessor companies.

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MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended Aug. 26 totaled 551,371 cars, the Association of American Railroads announced on Aug. 31. This was a decrease of 17,253 cars, or 3.0% compared with the previous week; a decrease of 50,493 cars, or 8.4%, compared with the corresponding week last year; and a decrease of 34,337 cars, or 5.9%, compared with the equivalent 1965 week. Ton-miles generated by carloadings in the week ended Aug. 26 are estimated at 14.0 billion, a decrease of 4.4% below the corresponding week of 1966, and 1.1% above the 1965 week.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, Aug. 26

District	1967	1966	1965
Eastern, including Allegheny and Pocahontas ..	211,276	238,612	229,792
Southern	109,938	112,961	111,128
Total Eastern and Southern Districts	321,214	351,573	340,920
Northwestern .	87,304	96,000	93,908
Central Western	105,368	114,936	112,221
Southwestern .	37,485	39,355	38,659
Total Western Districts	230,157	250,291	244,788
Total All Roads	551,371	601,864	585,708
Commodities:			
Grain and Grain Products	47,868	56,097	53,899
Livestock	1,584	1,878	2,099
Coal	109,744	120,444	114,604
Coke	6,549	8,421	8,483
Forest Products	40,567	40,854	39,732
Ore	44,878	60,159	51,193
Merchandise l.c.l.	4,212	6,283	8,465
Miscellaneous .	295,969	307,728	307,233
Aug. 26	551,371	601,864	585,708
Aug. 19	568,624	593,333	590,119
Aug. 12	552,213	581,545	588,748
Aug. 5	548,634	584,011	588,449
July 29	548,838	592,510	591,499
Cumulative total, 34 weeks ...	18,183,380	19,154,691	18,957,163
Estimated revenue ton-miles (billions) 34 weeks ...	469.8	479.0	447.9

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended Aug. 19 totaled 23,454 cars, carrying 39,000 trailers, compared with 23,430 cars, carrying 38,028 trailers, in the correpsonding 1966 week. Loadings for 1967 up to Aug. 19 totaled 741,624 cars, carrying 1,218,628 trailers, compared with 717,630 cars, carrying 1,181,696 trailers, in the corresponding period of 1966.

IN CANADA—Carloadings for the seven-day period ended Aug. 14 totaled 73,532 cars, compared with 67,017 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Aug. 14, 1967.....	73,532	21,885
Aug. 14, 1966.....	80,490	21,922
Cumulative Totals		
Aug. 14, 1967.....	2,353,794	779,286
Aug. 14, 1966.....	2,496,139	798,178

PASSENGER TRAIN CARS

► *New York Metropolitan Commuter Transportation Authority.*—Ordered 270 high-speed electric cars from the Budd Company at a cost of $57.3 million for the Long Island Rail Road. The 85-foot stainless steel cars each will have a seating capacity for 122 passengers. They will have double doors, electrically operated, located at points approximately one-quarter of the distance from each end of car. The new cars will be arranged in pairs, each unit completely equipped for independent operations. Each car will be powered by four motors, but certain auxiliary equipment, such as batteries, motor alternators and air compressors will be shared by each pair for purposes of weight and economy. The first four cars will be delivered in September 1968, four more in October and 30 in November. In the ensuing months the cars will be delivered at the rate of 28 cars per month.

NEW FACILITIES

► *New York Central.*—Equipped 32 diesel and electric locomotives operating in the New York suburban area with two-way radio units. Radio relay stations have been established at Spuyten Duyvil. Mott Haven, North White Plains, Woodlawn, Croton-Harmon, Brewster and Tarrytown. With the system, engine crews can communicate with train dispatchers directly or via the relay stations.

► *New York City Transit Authority.*—Ordered signal and control equipment costing $5.4 million from the Signal & Communications Division of WABCO. The equipment will be used in a multi-phase rehabilitation program for Coney Island Yard. WABCO will supply a central control console, signals, switches and wayside equipment.

TRACK EQUIPMENT

► *Southern Pacific.*—Ordered two Autojack Electromatic tampers and nine Autoliners from Tamper, Inc.

CAR OWNERSHIP

► *Serviceable cars increase.*—Revenue freight cars in serviceable condition owned by Class I railroads on Aug. 1 totaled 1,415,035, compared with 1,413,305 on Aug.1,1966, according to most recent AAR Car Service Division report. Estimated total ownership of all railroad- and privately-owned revenue freight cars on Aug. 1 (see table below) was 1,830,195 (average capacity: 62.14 tons), compared with 1,808,419 (average capacity: 60.34 tons), on Aug. 1, 1966.

ESTIMATED OWNERSHIP—ALL REVENUE FREIGHT CARS
(Aug. 1, 1967 vs. Aug. 1, 1966)

		Box	Covered Hopper	Gondola	Hopper	Flat	Refrig.	All Others	Total
Class I	1967	575,201	116,193	204,275	424,170	66,398	50,759	59,666	1,496,662
	1966	581,069	98,144	211,218	425,765	64,302	46,822	59,495	1,486,815
RRO&C Refrig.*	1967	0	0	0	0	0,	52,454	0	52,454
	1966	0	0	0	0	0	55,530	0	55,530
Private	1967	1,251	26,907	654	1,926	39,187	13,979	171,072	254,976
	1966	1,876	20,862	899	1,219	32,250	13,227	168,354	238 687
Class II & S&T†	1967	9,235	850	5,321	8,305	659	618	1 115	26,103
	1966	9,041	846	5,593	9,555	829	422	1,101	27,387
GRAND TOTAL	1967	585,687	143,950	210,250	434,401	106,244	117,810	231,853	1,830,195
	1966	591,986	119,852	217,710	436,539	97,381	116,001	228,950	1,808,419

*Railroad owned and controlled refrigerator car lines.
†Class II railroads and switching and terminal companies.

YOU OUGHT TO KNOW

Boston wants a PCC agreement: Officials of the Massachusetts Bay Transportation Authority have called a conference for Sept. 14 with transit officials from Pittsburgh, Philadelphia, New Orleans, Toronto, San Francisco. MBTA wants to explore ways to reach a common policy on replacement of aging street car fleets. Whether high-platform, low-platform or compatible vehicles is the answer is high on the agenda. One possibility is an agreement on car specifications, then a shopping trip to Europe.

Container expo coming up: The world's first international container services and equipment exhibition will be held in London, (England) May 27-31, 1968. Thirty exhibitors have already taken space. Joint sponsors are the International Cargo Handling Coordination Committee, the British Dock and Harbor Authorities Association and the London Chamber of Commerce. In anticipation of a heavy flow of visitors from around the world, plans are being made for a container conference to run concurrently with the exhibition. Exhibitions are also planned for Baltimore, Md., in October 1968; Melbourne, Australia, in the spring of 1969; and Hamburg, Germany, in October 1970.

Air-cushion pallets? A new firm has been formed in Seattle, Wash., to develop and manufacturer a variety of materials-handling equipment that will "float" over ground and water surfaces on a cushion of air. The firm, Air-Go, Inc., is being created with the cooperation of the Boeing Co., which has done preliminary developmental work. Air-Go's initial objective will be the perfection of small devices rather than full-scale air cushion vehicles. First production will probably be 8-x-10-ft air-cushion pallets. It's claimed that a set of five of these — each supporting up to 45 tons — could move sections of a plane as large as the 350,000-pound Boeing 747 through final assembly.

Habermeyer re-appointed: Three Presidents have now gone on record as liking the way Howard W. Habermeyer operates the Railroad Retirement Board. Habermeyer was first appointed as chairman and public member by President Eisenhower, to fill an unexpired term. He was later re-appointed by Presidents Eisenhower and Kennedy. And late in August the Senate confirmed his re-appointment by President Johnson, for a fourth full term.

E-L ferries to fade out: On Sept. 18 the Erie Lackawanna will reduce the number of its commuter ferries on the Hudson River from three to two, as part of a long-range phase-out of ferry service. The plan is for riders to transfer to PATH lines in Hoboken. Physical improvements at the Hoboken transfer point will cost $100,000, to be shared equally by the state of New Jersey and PATH.

Canada to integrate LCL-express: Canadian railways plan to combine their LCL freight and express services this month. To accomplish the "integration," the railways propose a single structure of rates, terms, conditions and handling rules for non-carload freight. Highway competition, reduction in passenger services, and accelerated turnover resulting from generally lower inventories carried by consignees are among the reasons given for combining the services, which are facilitated by the new transport legislation that became effective earlier this year.

Rockefeller names transport chief: The new department of transportation in New York is about to get going, and Governor Nelson Rockefeller named the man who will run it. J. Burch McMorran, until now superintendent of public works, will serve as first director of the new agency, which will bring together all transportation-related activities conducted by the state.

Truck tonnage: Intercity truck tonnage in the week ended Aug. 19 was unchanged from that of the previous week, but was 5.3% below the volume in the corresponding week of 1966, according to American Trucking Associations.

Current statistics

Net Income	
3 mos., 1967	$120,000,000
3 mos., 1966	172,000,000
Carloadings, revenue freight	
34 wks., 1967	18,183,380
34 wks., 1966	19,154,691
Freight cars on order	
Aug. 1, 1967	27,063
Aug. 1, 1966	58,892
Freight cars delivered	
7 mos., 1967	62,317
7 mos., 1966	59,787
Serviceable cars	
Aug. 1, 1967	1,415,035
Aug. 1, 1966	1,413,305

Transport forum asks new approach to technology

The necessity of a "big picture" approach to new transport technology was a continuing theme at a recent forum on transportation engineering in New York City. This was summarized by John deS. Coutinho, forum chairman, who explained that a community need no longer tolerate inherited, historical modes of transportation if they be inadequate or undesirable.

There are the resources, he explained, to provide whatever modes of transportation are technically and humanly most effective in any given situation. "Inherent in this new approach," he continued, "is the prior identification of the true needs of the community as a basis for developing an optimum solution." He called this a "systems approach in its broadest sense," saying that it involves not only the engineer "but the humanist, the sociologist, economist, geographer, historian, and experts in other disciplines."

Senator Claiborne Pell (D-RI) expressed concern about the "rather startling progeny" of the megalopolitan transportation plan he fostered in 1962. With Pell's original rail-oriented Northeast Corridor program expanded now to include a diversity of transport modes, even the politics of the situation has been complicated. "One of the striking things about the politics of new transportation technology," said Pell, "is its tendency to coalesce at the federal level. . . . As the process of decision making becomes more rational, more systematic, more scientific, it seems to lend itself more and more readily to centralized control."

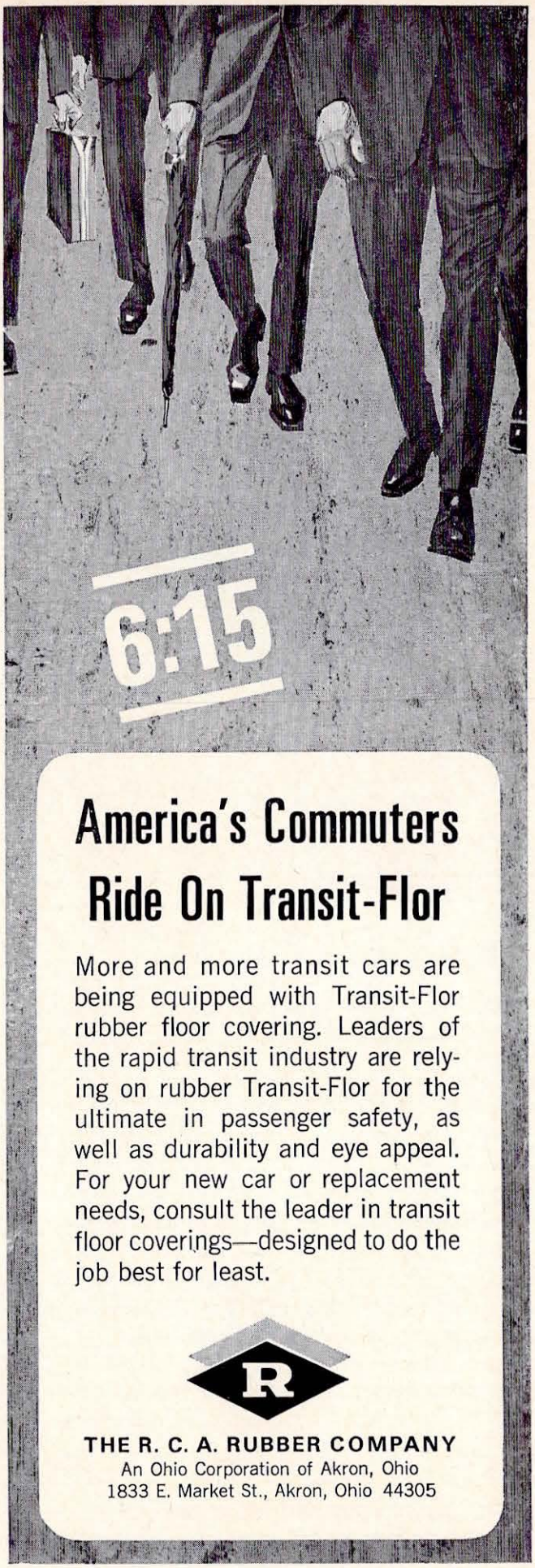
● **Components, yes . . . systems, no.** While our free-enterprise economy has been good at producing the components of a national transportation system, Pell explained, "it has been woefully deficient in providing a rational environment or a comprehensive system in which these concepts can operate."

The government, however, has been no more adept at a "big picture" approach. "While decision making in the field of transportation will tend to be more and more centralized at the federal level," noted the Senator, "the responsibility for implementing it at this level is quite fragmented among several different agencies."

He cited the obvious confrontation between the Departments of Transportation and of Housing and Urban Affairs.

"We might conclude," said Pell, "that there is need for revamping the decision-making process at the highest level of the government, perhaps establishing within or along side the Bureau of Budget a kind of policy ombudsman to challenge the computers, sort out overlapping programs, promote interagency cooperation and, above all, apply the litmus of human benefit to every program that comes his way." This, he said, might be a solution to the dilemma of the political policy maker in an age of great innovation.

Perfection of hardware in advance of operating concepts was reported in the standardization of intermodal, international containers. Under the American Standards Association, there has been agreement on dimensions, design factors and handling systems. Still to be resolved are ways to minimize documentation for through movements, reciprocal customs agreements to permit unrestricted international movement, and identification systems for proper logistic control. ■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RAILWAY BOOKSHELF

Does anybody ever connect Charles Francis Adams with the Union Pacific? He was its president for a short time, and that fact forms one of many interesting interweaving themes in "Boston Capitalists and Western Railroads," (Harvard Univ. Press, Cambridge, 1967, 392 pp., $10.00) by Arthur M. Johnson and Barry E. Supple. The former is a business history professor at Harvard, the latter professor of economic and social history at the University of Sussex. Their great theme is that the Yankee merchants who built fortunes on the China trade in the early 19th Century were looking for new worlds to conquer, and in the fledgling railroad industry they found their opportunity. The process began with smaller ventures in New England such as the Boston & Lowell (a component of the present B&M) and the Boston & Albany (now a branch of the New York Central), but as time went on, it grew to the point where Boston entrepreneurs were leaders in conceiving, financing and sometimes even operating some of the great roads of the West, including the Illinois Central, Burlington, Union Pacific and Santa Fe. The narrative style of Messrs. Johnson and Supple is sober but never dry; the story is too dramatic for that.

●

The third edition of the "Crane Handbook" (Whiting Corp. 206 pp., Harvey, Ill., $7.50) is out. Whiting engineer H. G. Greiner prepared the illustrated book which gives complete details and specifications on design, operation and maintenance of cranes.

●

New in the technical field this year is High Speed Ground Transportation Journal (International Society for Terrain-Vehicle Systems, Box 4824, Duke Station, Durham, N.C.). Edited by J. J. Murray of the Engineering Sciences Division, U.S. Army Research Office—Durham, and published three times a year, the journal is intended as a forum for literature in the HSGT field. In discussing last year's survey of HSGT technology done by MIT, the authors' critique does not indulge in back-slapping. A sample of the adjectives: "uneven," "inverted thinking," "arbitrary."

●

Traffic men will want "A Bibliography on Economics of Containerization," compiled by Dorothy V. Ramm (Library of the Transportation Center, Northwestern University, Evanston, Ill., 12 pp., $1.00 each for 10 copies, also bulk rates).

●

The CB&Q gained wide attention with an ad campaign that argued—"Let's get out of the railroad business, we are in the distribution business." Similarly, Harvard Business Professors Paul W. Cherington and Lewis M. Schneider argue in "Transportation and Logistics Education in Graduate Schools of Business Administration" (Harvard Graduate School of Business Administration, Boston, $2.50, 1967, 165 pp.) that transportation executives need to be more logistics-oriented—and the business schools are the places to prepare them for this. **—Joe Asher**

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Aristocrat Inns 32
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Brenco, Incorporated ..... IFC
Bruce Co., E.L. 31
Ewards, O. M. Co., Inc 36
Garrett Corporation Signal Company ..... IBC
General Railway Signal Co. 9
General Steel Industries, Inc., St. Louis Car Division .... BC
Pullman Standard, Division of Pullman Inc. 14-15
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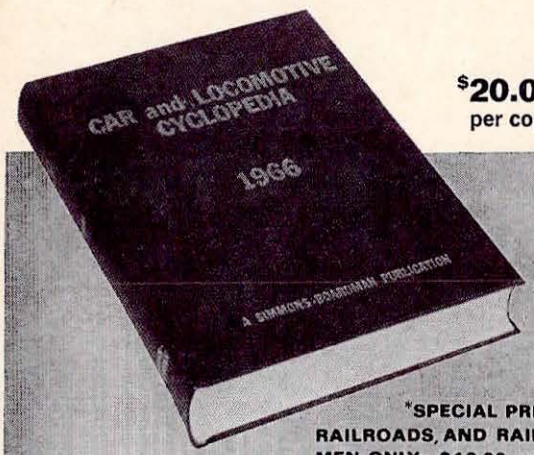

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VIEWPOINT

Moderation in new wage demands?

The music seems to be getting louder, as the United Auto Workers and the automobile manufacturers dance out the final few bars of the bargaining ritual that may or may not produce a crippling strike early in September. But while the furious sound of the automobile-industry negotiations captures the public attention, railroad men are listening for the first note of whatever song it is the brotherhoods will be singing in what's coming to be an annual cantata-for-more-money.

For some weeks, now, there have been indications that the new demands will be stiff—but not so stiff as the initial demands that touched off the last round of negotiations. The biggest of the operating unions has indicated it will start off with a demand for 12.5%. The top officer of another major union has said that his organization's notices will contain an even smaller percentage figure. It might be assumed that the demands of other unions will hew reasonably close to the line established by the organizations first in line. But there's no guarantee of that—and for every hint of moderation coming from certain union leaders, there's an expression of increased militancy from others. For all the talk of closer union cooperation and even merger, rail labor's house is still divided.

Over all, however, those who look for bright spots can find a few. For one thing, the unions leading off in the new wage movements may well be those whose leaders prefer quick and more or less reasonable settlements to long and bitter arguing. For another, rail labor was badly shaken by the events surrounding the shopcraft wage dispute. To union leaders who look at the total picture, the last thing wanted now is another crisis. Twice, Congress has met a critical situation with an ad hoc solution. Twice, arbitration has been imposed. And nobody, among labor's thought-leaders, wants to put a loaded gun in Congress's hands a third time. So let the bargaining begin.

Here's that Meyer man again

It is always refreshing to find a thinker who is willing to swim against the prevailing tide of opinion. It is profoundly disturbing when such thinking is represented as the tide itself. That is the result (if not the intent) of an essay on "Urban Transportation," by Harvard Professor John R. Meyer, appearing in a recently published book called "The Metropolitan Enigma."

Professor Meyer's well-known position in favor of highways, and against rail rapid transit, is eloquently restated in this essay. As he sees it: "The most urgent policy question seems to be whether cities will choose to solve any short-run transportation problems they face by using rather blunt and unsophisticated methods (in the form of heavy capital investments in immobile and inflexible rail transit used on a standby or part-time basis for a few hours a day) or whether the self-discipline can be mustered to organize the extensive urban street and highway capacity already in place to better serve today's needs."

Take careful note of those phrases—"short-run transportation problems," and "today's needs." Smart city planners, of course, like those in St. Louis who are quoted elsewhere in this issue, know that they must worry today about tomorrow's transport needs. After all, Bay Area Rapid Transit's first train won't run until 16 years have elapsed from the time serious planning got under way—and things in the Bay Area have moved along a lot faster than in most other urban complexes.

Even so, Professor Meyer doubts that rail transit is really economical for any cities with population densities less than those of New York or Chicago (a statement, by the way, that must perplex those 20 or 30 European cities, with populations ranging upwards from 500,000, that are now building or using rail transit systems).

Professor Meyer has a right to his opinion; indeed, such dissent is always valuable. What bothers us is the fact that this curious essay on "Urban Transportation" appears in a 338-page volume that carries the prestigious imprimatur of the Chamber of Commerce of the United States. Conceivably this book could—and doubtless is intended to—affect the thinking of city planners across the nation. It's unfortunate, to say the least, that a man with his known bias should have been selected to write this important section of an important book. It's something like going to a butcher for surgery.

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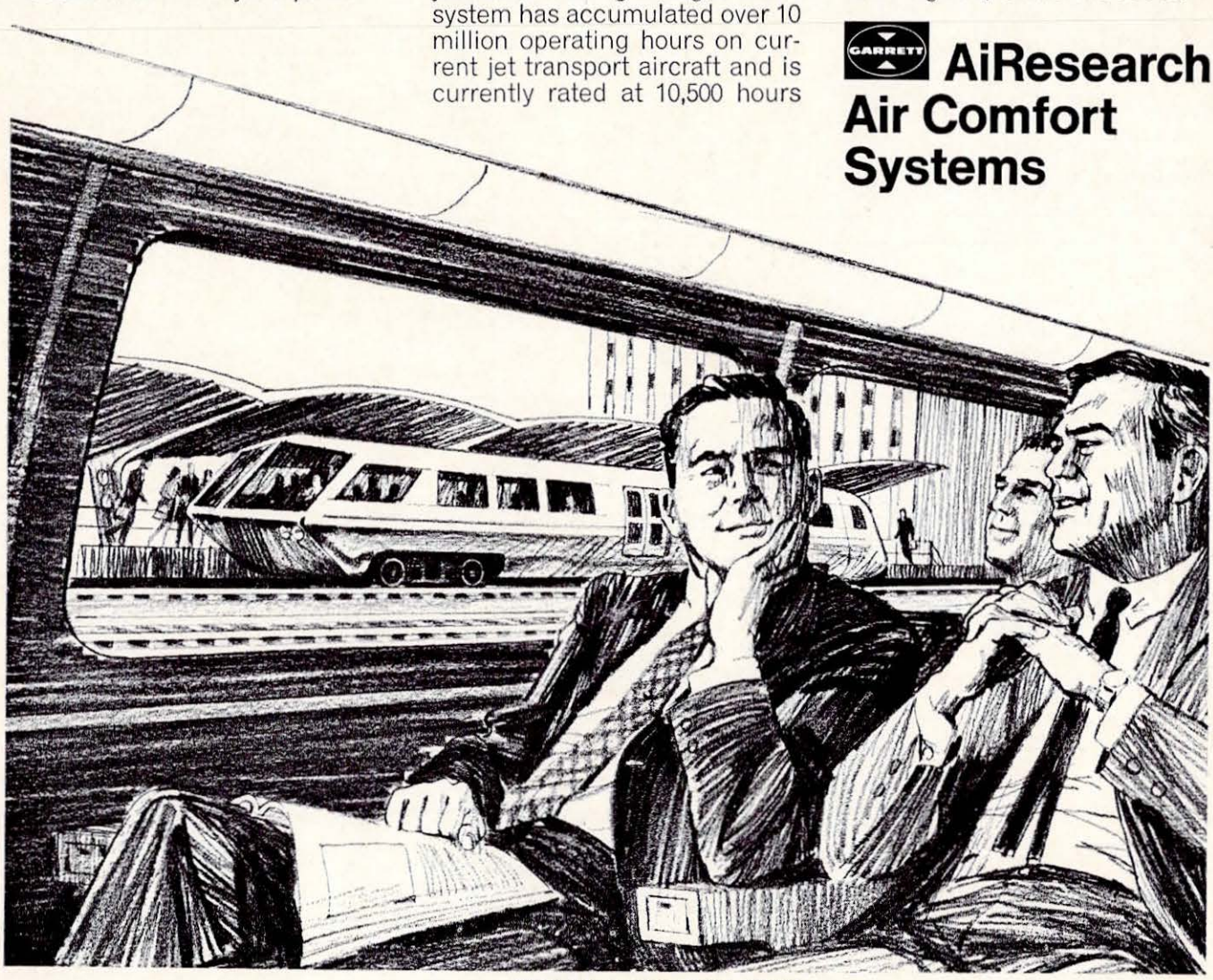

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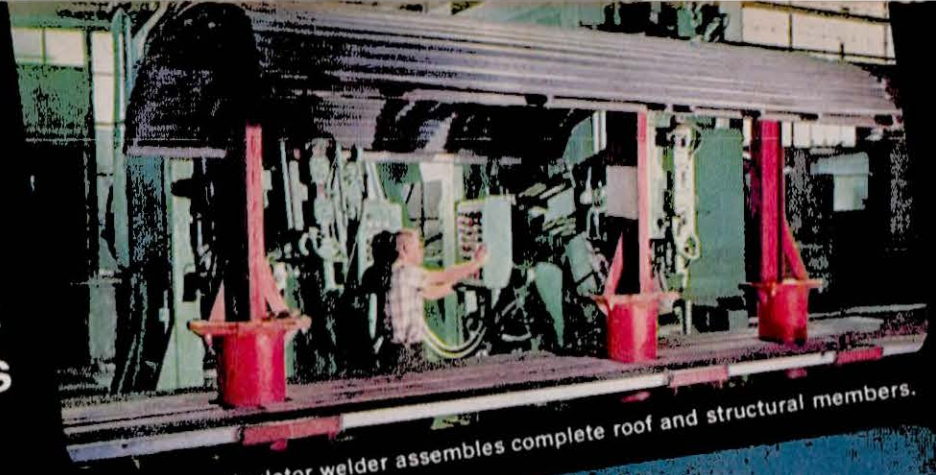

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